

# The State of the Central Valley Region Address

## A Five-Year Review Reflection and Projection

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Executive Officer



Good Morning, Chair Hart and members of the Board, I am happy to provide to you this State of the Central Valley Region Address. The title of my presentation is A Five-Year Review – Reflection and Projection because I wanted to provide you an overview of the Board activities since I was appointed as your Executive Officer and to discuss with you the actions and accomplishments we plan to achieve over the next five years. I'm happy and proud to report that we have accomplished many things.

My previous State of the Region addresses which emphasized how hard Board staff works within very tight constraints, that message remains the same this year; in fact, I fear we may be facing even tighter constraints. With that said, our activities have resulted in a positive impact to water quality and the environment.

The Central Valley Water Board has been blessed with a fabulous staff that is very technically competent and dedicated to the mission of the Central Valley Water Board. They work very hard to ensure the waters of our Region are protected and restored, and that we are doing our part to ensure California has a sustainable source of water for our current and future generations. So today I will be spending the next hour or more with you to share our story, a story that provides past trends and current and future events.

# Surface Water Quality Program Review

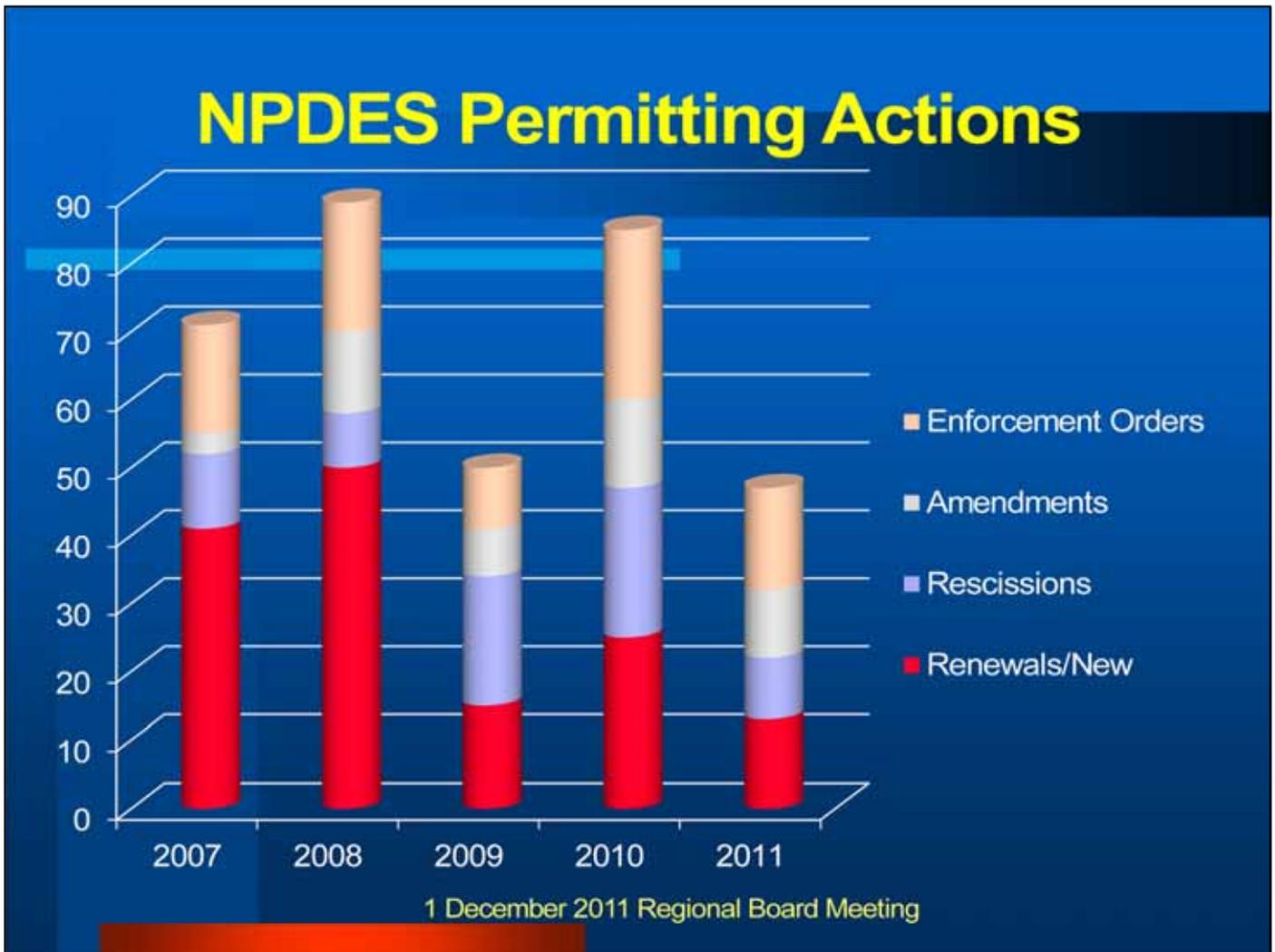
# NPDES Permitting Workload

- **New and Renewed Permits**
- **Amended Permits**
- **Enforcement Orders**
- **Permit Rescissions**
- **General Orders**

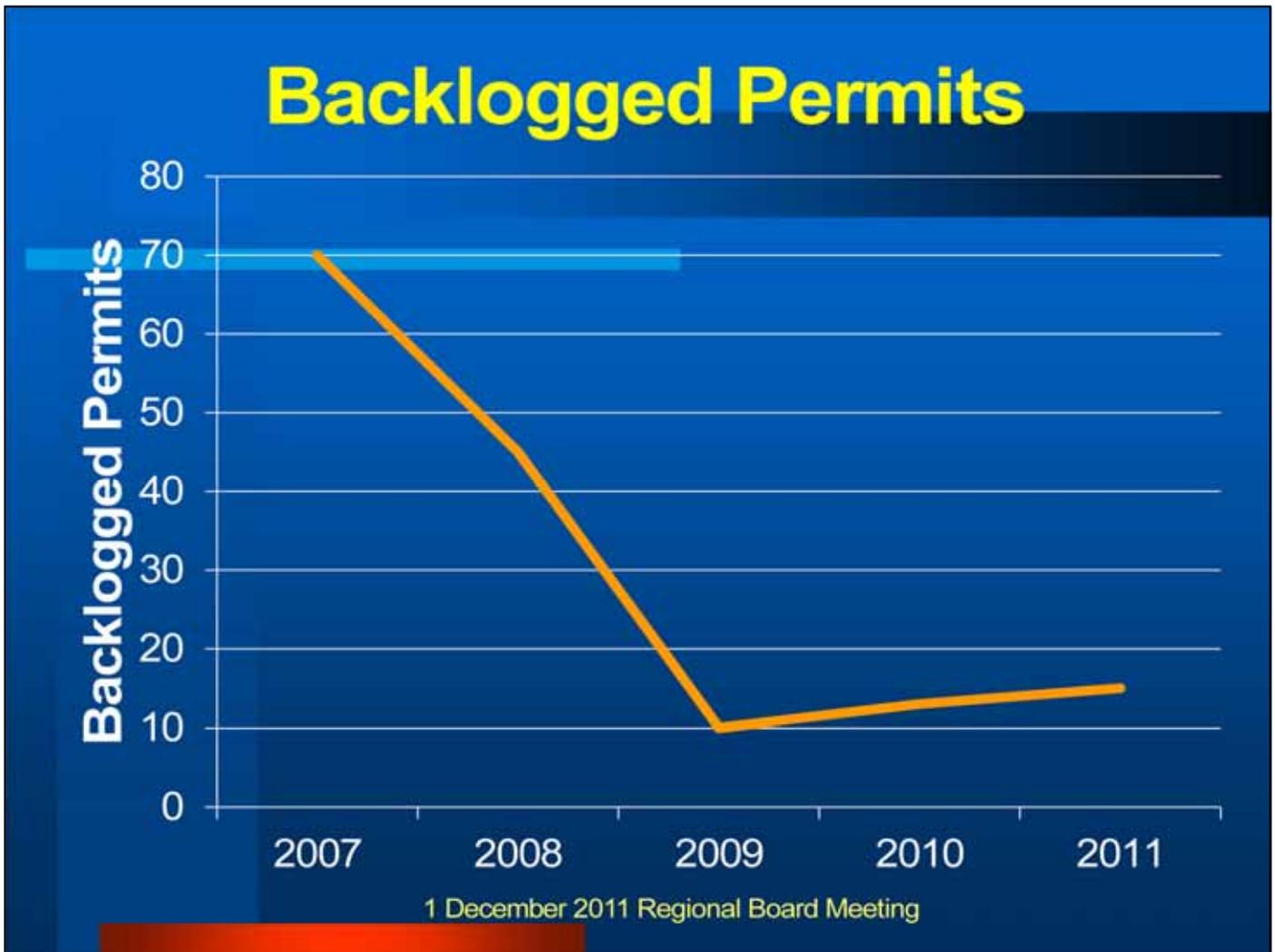
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The program primary focus of the NPDES Program is the permitting function and is separate from enforcement. Our NPDES Program is devoted to regulating municipal and industrial wastewater discharges. We have 171 individual NPDES Permits in our Region out of the approximately 700 permits statewide. The Central Valley Region handles about one-quarter (25%) of the individual NPDES permits adopted State-wide.

Our Permitting Workload includes the development, adoption and implementation of .....[read from slide]



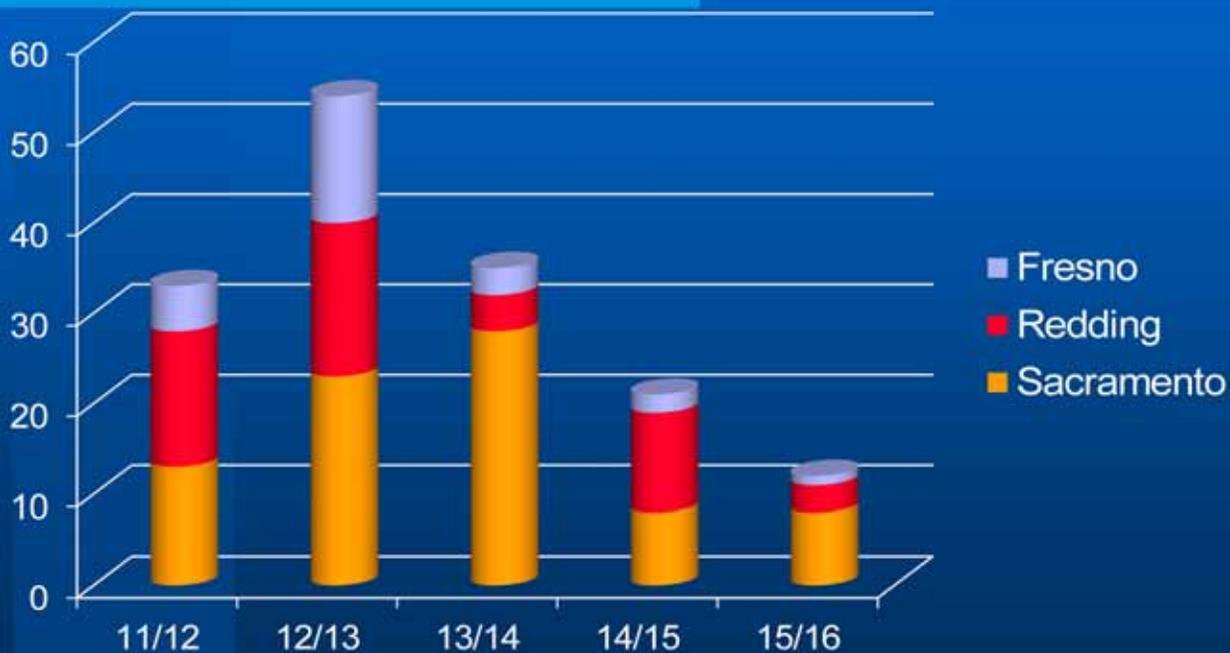
This chart shows all NPDES permitting actions over the last 5 years. The permit renewals and new permits are shown in red, rescissions are shown in purple, amendments are shown in gray, and new enforcement orders to provide time schedules are shown in tan. In 2007 and 2008 there was a big push to reduce the permit backlog, which is shown here with high numbers of permit renewals. In 2010, the CTR criteria became effective, which in many cases required the adoption of enforcement orders to provide MMP protection for dischargers that still were not able to comply with the May 2010 CTR compliance date. In addition, the Board adopted the General Order for Fish Hatcheries, which allowed the rescission of about 14 individual permits issued to hatcheries.



In 2007 the Region had a significant number of backlogged permits. With all the permitting activity in the last five years, we have significantly reduced the backlog. As we entered 2008, we had almost 70 NPDES permits listed as officially backlogged. With USEPA contractor assistance and implementing internal measures to become more efficient, we have reduced the backlog to one-fifth of that backlog. Our permits are very complex and you have experienced first-hand the issues associated with even our smallest discharges. Our accomplishment in reducing this backlog is due to hard work from our staff.

Over the past 2 years the backlog has been essentially flat. With our NPDES Permit terms being 5 years, the large number of permits adopted in 2007 and 2008 are now coming due in 2012 and 2013.

## Upcoming Permit Renewals for Zero Backlog



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There will be a heavy workload for our staff and Board in 2012 and 2013. This graph shows the permit renewals workload that we must accomplish in the next five years, identified in different colors for the three different office, to maintain a zero backlog. Our success will depend on continued internal efforts to streamline the permit development process while addressing critical water quality issues. We are continuing close working relations with CVCWA, our dischargers and other stakeholders to address our complex issues while keeping our permitting progress going forward.

## 5-Year Commitment



- 30 Permits / Year
- Address Backlog over 5-Year Period
- Maintain Renewals as Top Priority
- Leverage Outside Resources
- Permit Consistency

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We can commit to approximately 30 NPDES permits per year. This is a high production rate that depends heavily on our contract assistance and keeping internal board adoption processes as efficient as possible. As you see on the graph, this will leave a backlog of about 25 permits during the period of 2012 through 2014, but we can address that interim backlog in 2015 and 2016 when we have a smaller number of permits expiring.

To do this, we must keep permit renewals and rescissions as our top workload priority. We may not get to amending permits or issuing separate time schedules outside of the permit renewal schedule, as Dischargers have been requesting due to the results of new studies or other new information.

We also commit to working smarter with our stakeholders and other agencies, incorporating efficiency by leveraging outside resources, especially for research of complex issues associated with our contested permits which take up a tremendous amount of staff resources.

Lastly and just as important, we will continue making internal changes for permitting consistency to not only address this heavy workload, but also to produce high quality permits that are fair and equitable among our permittees.

# External Stakeholders Assisting with Issues

- **Cyanide**
- **Aluminum**
- **Hardness**
- **Mixing Zones**
- **WET Triggers**
- **Small Communities**
- **MUN Issues**

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The Central Valley Clean Water Association, private consultants and CVSALTS are among the external stakeholders that are assisting in addressing surface water discharge issues.

As the Board was briefed at the June Board meeting, staff is working closely with local scientists and experts regarding the issue with cyanide, and potential false positives due to laboratory procedures. Other issues we are working closely with CVCWA and others include Aluminum toxicity, Hardness related to metals toxicity, mixing zones, whole effluent toxicity, and standard federal and state regulations that greatly impact our small disadvantaged communities. Also as discussed at the June and October and today's Board meeting, CVSALTS is working on basin planning issues that impact NPDES permit holders as well as agricultural stakeholders, such as the Municipal Water Supply Use designation on our constructed agricultural canals.

# NPDES General Orders 2008 - 2011

- **Low Threat**
- **Petroleum**
- **Limited Threat**
- **Concentrated Aquatic Animal Production**
- **Replaced 17 Individual Permits**



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Maximizing use of our four General Orders for NPDES Discharges allows us to streamline the permitting process for several categories of discharges and helps us to eliminate allocating staff resources to write individual permits for new dischargers and allows us to move some facilities currently regulated by individual orders to General Orders.

Since renewal of the Low Threat Order in June of 2008, we have provided 105 dischargers regulatory coverage for construction dewatering activities and water district system discharges.

Since 2008, we have provided regulatory coverage for 30 Clean Up Projects under our Petroleum Cleanup Order.

Since our June 2008 adoption of our new Limited Threat General Order, we have provided regulatory coverage for 12 discharges that pose a limited threat to our surface waters.

Since our January 2010 adoption of our new General Order for Concentrated Aquatic Animal Production General Order, we have enrolled 14 Hatcheries, resulting in the rescission of those existing individual permits, with more to be done.

To date we have used General Order to provide coverage to 17 permit holders that were previously regulated by individual orders. That number will continue to increase with the continued use of these orders.

# Environmental Outcomes and Major Accomplishments

- **Reduced Ammonia Nitrates**
- **Increased Human Protection**
- **Successful Salinity Reduction**
- **Successful Pollution Prevention**
- **Increased Efforts for Regionalization and Recycling**



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Of most importance are the environmental outcomes resulting from compliance with our permits.

With the nitrification and denitrification requirements for both our small and large dischargers, we have significantly reduced the Ammonia and Nitrates levels in our waters, and will be further reduced as more of our permittees meet their compliance dates. All our dischargers that discharge into the Delta, and now including Sac Regional, have these requirements. We have seen significant water quality improvement as Stockton, Tracy and Lodi have reduced their ammonia loading. Further significant improvements will result in the next decade as Sac Regional follows through with permit compliance.

Most of our NPDES permittees are required to upgrade their systems to tertiary treatment, providing for a decrease level of pathogens discharged, resulting in increased Human Health Protection.

Additionally, our municipal dischargers are successfully reducing their salinity inputs and preventing pollution from entering their treatment systems through changing chemical used, discouraging environmentally unfriendly water softeners, and changing their municipal water supplies.

Lastly, our larger municipalities are continuously working with their surrounding smaller communities to Increased Efforts for Regionalization and Recycling.

# Stormwater

- **Construction Boom**
- **Increased focus Industrial sites**
- **MS4 Permits Reissuance**
- **Reissuance of Statewide General Permits**

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Slide 11

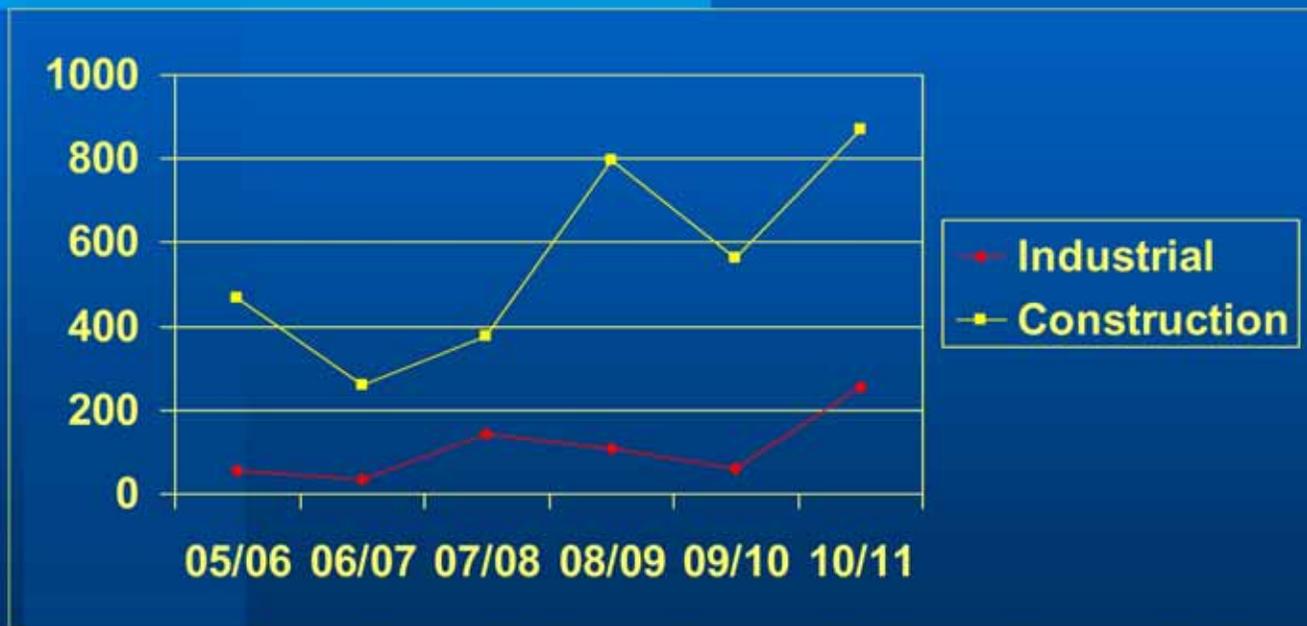
During the 2000-2008 construction boom staff focused our storm water efforts on the construction program due to the large number of construction projects within our jurisdiction and the potential of these projects to negatively impact our receiving waters that provide critical spawning habitat for sediment-sensitive endangered and threatened species.

In the past two years we have redirected some of our resources to the industrial program, especially in our Sacramento office where we have dedicated inspection and enforcement staff.

Also staff in all offices have dedicated more time to the identification of storm water permit non-filers. Identifying non-filers and requiring them to obtain permit coverage has long been a high priority of the U.S. EPA

We have 8 individual municipal storm water permits that our Board adopts, and staff is actively engaged in the revisions to and enforcement of the four statewide storm water permits.

# Stormwater Construction and Industrial



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Slide 12

This chart illustrates the number of construction inspections and industrial inspections for the last few years.

We have increased the number of industrial inspections from a proposed 125 to 205 that were completed in 2010-11.

The number of completed construction inspections (821) was unusually high compared to the number of projected inspections (550). Staff put extra effort into visiting construction sites that lost permit coverage in September 2010 when their owners failed to re-certify under the new construction general permit. These inspections were largely drive-by visits to determine whether these sites needed to obtain coverage or were sufficiently stabilized to terminate from the permit.

# Stormwater MS4 Program

- Stockton/San Joaquin – 2007
- Modesto – 2008
- Sacramento – 2008
- Contra Costa - 2010
- Port of Stockton - 2011
- Statewide Construction, Caltrans, Industrial & Phase II MS4 Permits

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Slide 13

Most Stormwater permittees are regulated by one of four statewide permits. However, we do have 8 municipal storm sewer systems that are subject to individual Phase 1 MS4 permits adopted by our Board:

1. Stockton/San Joaquin Area wide permit 2007
2. Sacramento Area wide permit (8 permittees) 2008
3. Modesto Area Wide permit 2008
4. Contra Costa County 2010
5. Port of Stockton 2011
6. Fresno
7. Bakersfield

With the exception of the Fresno and Bakersfield MS4 permits, we are up to date with these major permits. I am currently engaged in an effort by the State Board and Regions 2, 4, 8 and 9 to improve on the consistency and efficiency of the Phase I MS4 Program. Based on these discussions, over this next year I will want to explore the option to issue a Regionwide Phase I MS4 Permit if the State Board should decide against issuing a Statewide permit.

Regional Board Staff have been actively engaged with the State Board in reviewing draft versions of the Caltrans Permit, the Industrial General Permit and Phase II MS4 permit. These permits are all scheduled to be adopted by State Board within the next 6 months. Our staff was also very engaged in the development and implementation of the Statewide Construction General Order that was adopted by the State Board in 2009.

# Stormwater Caltrans

## Audit, Inspections & Enforcement



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Slide 14

In 2010 USEPA with assistance from our Redding staff completed an audit of the Caltrans MS4 permit and issued a “Finding of Violation and Order for Compliance” enforcement order. Staff has completed over 50 Caltrans inspections following the enforcement order so far this year. We have been working with Caltrans management and staff to resolve issues and have seen fewer stormwater problems at Caltrans sites. However we will continue to inspect their construction sites and evaluate their program.

This is a picture of the Caltrans I-5 Antlers Bridge realignment project on Shasta Lake. The slide shows the dramatic erosion and sediment controls required for a massive cut and fill project that threatens surface waters.

# Timber Harvest Regulatory Program



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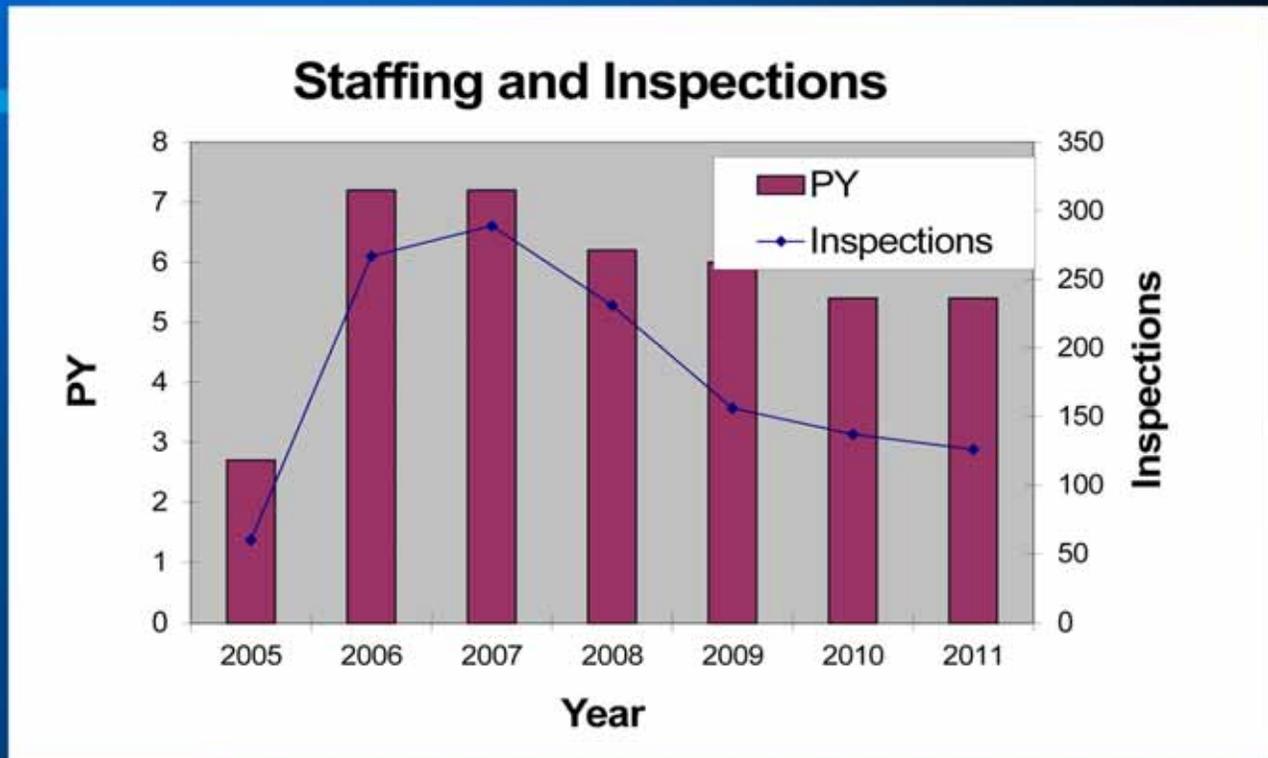
I like to highlight some of our regulatory programs during my State of the Region presentation. Historically my focus has been on new or enhancing programs. But this year I will be spending a little more time chatting with you about three very important core programs that have not been given a lot of time in previous presentations – Timber Harvest, Basin Planning/TMDL and our cleanup programs.

The timber harvest regulatory program provides review, oversight and enforcement on timber harvest activities on both private and federal lands within our region. The primary responsibility of program staff is to participate in the review and inspection of harvest activities. On average, 62% of the timber harvest conducted statewide on private lands occurs within our region each year. This equates to approximately 100,000 acres put under harvest plans on private lands each year.

Harvesting activities on U.S. Forest Service lands accounts for approximately 30% of the statewide timber harvest each year. Staff has been increasingly involved in the review and oversight of federal timber operations over the last five years due to concerns raised by the public.

We believe that conducting pre-project field inspections allows us to be proactive in locating potential sediment sources that pose a threat to water quality and ensuring appropriate management measures are taken to reduce or eliminate those threats through the life of the project.

# Timber Harvest Regulatory Program



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The timber harvest regulatory program has seen significant changes to our funding and field staffing resources in recent years. We judge our success by improvements we see in the field and so prioritize our efforts for pre-project, active operations and post-project inspections.

In 2005, the program operated with only 2.7 PY field staff conducting just less than 60 inspections on both private and federal timber harvest activities per year.

In 2006, the program was the beneficiary of an increase to 7.2 PY field staff. This allowed the program to increase its inspection efforts substantially and for the next couple of years staff conducted approximately 300 inspections annually.

Beginning in mid-2008 through late 2010 the program was subject to several General Fund reductions, losses in PY authority and internal redirection of staffing resources.

Currently the program is holding steady with 5.4 PY, 4 of which are field staff. Those field staff conducted approximately 126 inspections in 2011.

# Timber Program

## ● Accomplishments

- Major improvements in relationships with USFS, BLM, Counties and State Park Service
  - Off-Highway Vehicle use
  - Road management
  - Legacy road decommissioning
  - Meadow and Aspen restoration projects



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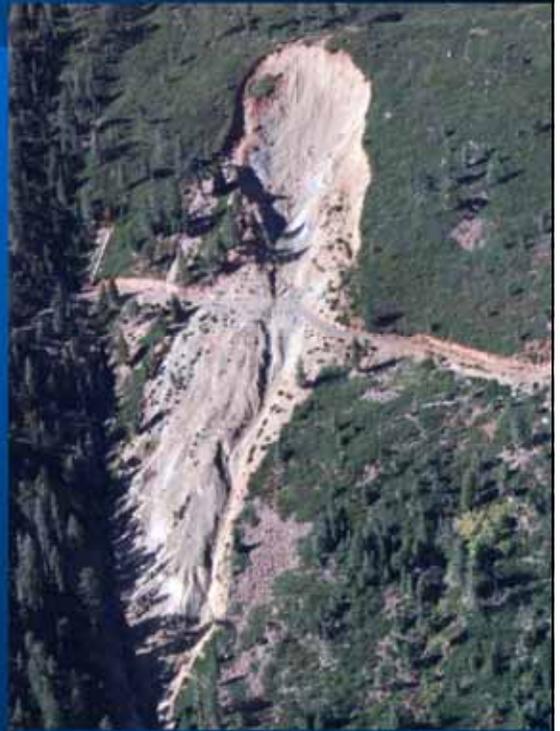
Despite several challenging years with funding and PY changes, program staff has made significant progress in developing working relationships with landowners of forested lands in the Central Valley. These landowners include the U.S. Forest Service, the Bureau of Land Management, the State Park Service, local counties, and both private and federal power authorities.

These connections have lead increasingly to our participation during the development and implementation phases of various projects in our forested watersheds. These projects include off-highway vehicle use areas, road construction, reconstruction and maintenance activities, and meadow and aspen restoration efforts. This participation is crucial, specifically for roads and watercourse crossings as they have been proven to produce the majority of anthropogenic sediment discharged to surface waters in our forested watersheds.

# Timber Program

## ● Accomplishments

- Continued participation in the State Board of Forestry's rule making process
  - Anadromous Salmonid Protection rules
  - Road Rules package



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Program staff continues to actively participate in the State Board of Forestry's rule making process for timber harvest activities on private lands. Staff is frequently called upon to provide technical review of rules packages. The most recent examples of which include; the Andromous Salmonid Protection Rules which are intended to address activities in watersheds containing threatened and impaired aquatic species, and the Road Rules package aimed at improving best management practices (BMPs) related roads used for timber harvest activities.

# Timber Program

## ● Accomplishments

- **Developed stratified sampling scheme for in-channel monitoring**
- **Conducted analysis of available water quality monitoring data for forested watersheds**



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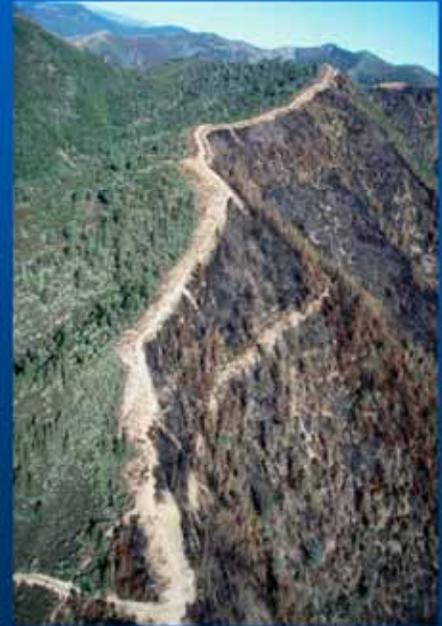
Staff participated in a cooperative effort with the U.S. Forest Service and Colorado State University to develop a stratified sampling scheme for in-channel monitoring on Forest Service lands in California.

Staff performed an analysis of available water quality monitoring data for the forested watersheds of California. Results of this analysis will be used to inform future water quality monitoring needs in the Central Valley region.

# Timber Program

## ● Accomplishments

- **Restoration activities in Butte Creek watershed**
- **Post-fire assessment**
- **U.S. Forest Service**
  - **Water Quality Management Handbook**
  - **Statewide Waiver**
- **Tour for EPA staff**
  - **Timber harvest and restoration**
  - **Plumas and Shasta Counties**



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Additional successes include our work with Butte County Resources Conservation District and the Bureau of Land Management to implement significant road restoration activities necessary to protect the beneficial uses of the Butte Creek watershed.

Staff participated in both the federal and state's post-fire impacts assessment teams during the fire storms of 2008. Significant resources were expended to prevent or reduce the impacts of man-made roads and crossings within the burned areas.

Staff assisted the State Water Resources Control Board and the U.S. Forest Service in the revision of the best management practices for the new Forest Service Water Quality Management Handbook and also participated in the development of the State Board's associated proposed statewide Waiver of Waste Discharge Requirements for non-point source activities on Forest Service lands.

Program staff organized and conducted a 2 and 1/2 day tour of Plumas and Shasta county timber harvest and other restoration projects for several EPA staff at their request in June of this year.

# Timber Program

## ● Accomplishments

- **Battle Creek Task Force**
  - **Clearcuts impact restoration project?**
- **Assembly Committee on Accountability**
  - **Cost of timber harvest plan review process**
- **New Performance Targets**
- **Paperless**



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Program staff has been participating in an interagency task force put together by the Secretary of Natural Resources to investigate allegations that clearcut harvesting in the Battle Creek watershed is discharging sediment to surface waters. Concerns by environmental stakeholders center around the potential for these clearcut activities to negatively impact a \$128 million federal salmonid habitat restoration project downstream.

Two of our field staff were assigned to participate in the field assessment, to analyze the resultant data gathered by the task force, prepare a report on the findings and present said findings at the November 2011 Board of Forestry meeting. The assessment concluded that clearcut units have not discharged sediment to surface waters, but that both county and private native-surfaced road systems and their associated watercourse crossings do.

Staff recently prepared program information for the State Water Resources Control Board to take to the Assembly Committee on Accountability and Administrative Review. The Committee is reviewing the timber harvest review process, the cost to the state and the benefits to the people.

In cooperation with the State Board and the two other Regional Boards with timber harvest regulatory programs, we developed new achievable performance targets for the State Board.

The timber harvest regulatory program has also made great strides in converting to an entirely paperless system.

# Timber Program

## ● Challenges

- **Funding and PY authority changes**
  - Oregon Ninth Circuit Court NPDES ruling
  - USFS Waiver for NPS activities
  
- **Increased need to review other activities in forested watersheds**
  - Beegum road project

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We are anticipating continued challenges due to potential program funding uncertainties. Resource limitations compounded by further reductions are of concern especially in light of additional responsibilities coming to the program.

A recent opinion issued by the Ninth Circuit Court will have the effect of requiring forested roads related to timber harvest to have NPDES permits. Staff is working with the EPA and the State Board to develop workable solutions. The ultimate impact of the decision on the program's policy and staff workload is unknown at this time.

Additionally, the proposed statewide U.S. Forest Service Waiver, once adopted, will add a significant new workload to the program. The Waiver will require staff to track, review and approve, inspect and enforce a variety of non-point source activities that are not currently permitted or otherwise overseen within the program.

The combination of newly established relationships with non-traditional, non-private forested landowners, the successful establishment of the valuable resource our technical staff provides and the upcoming application of both the statewide NPS Waiver for the Forest Service and the NPDES ruling, has resulted in increased demands on regional board staff with technical, forestry-related experience. Such demands include requests for assistance on projects such as the new proposal by the Forest Service to restore, stormproof, close and otherwise alter approximately 200 miles of native-surfaced roads in the Beegum watershed, a watershed important for providing steelhead and Chinook salmonid habitat in Shasta and Tehama counties.

# Timber Program

## ● Challenges

- **Battle Creek Assessment**
  - Data analysis
- **Training of equipment operators**



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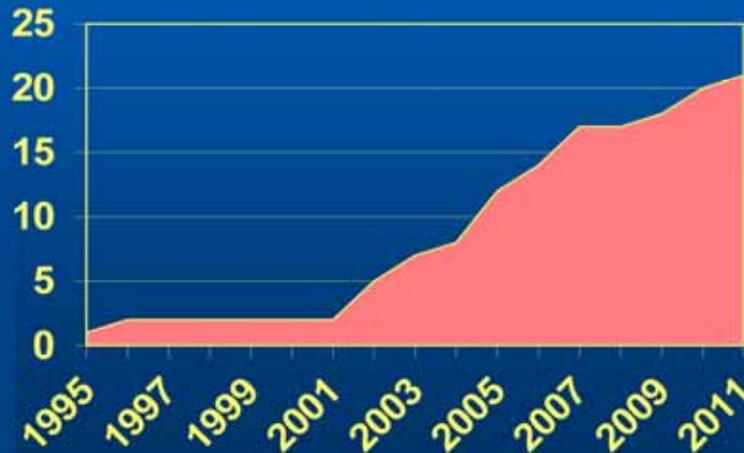
It is clear that program staff will be involved at some level in the further assessment of the situation in the Battle Creek watershed to help insure the success of the federal restoration project to restore access to 42 miles of salmonid habitat.

Staff plans to continue pursuing opportunities for disseminating state-of-the-art best management practices to those people who operate the heavy equipment that modifies our forested landscape. Focusing on the necessity for resource protection will provide greater understanding and commitment on the part of those operators.

# Basin Planning and TMDLs

## ● Accomplishments

### ◆ Total # Amendments Adopted Since 1994



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Since 1994, the Board has adopted 22 amendments. 10 of the amendments that were adopted since 2002 established TMDLs that addressed about 60 impaired water bodies, including the Delta and tributaries to the Delta. Measurable improvements have been documented in many water bodies. A couple examples are highlighted in the following slides.

# Diazinon Delisting

- 58 river miles delisted diazinon
- Implementation of diazinon TMDL and SRWP strategy
- Label changes
- Dormant spray regulations



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Diazinon is an organophosphorous (OP) pesticide used on several crops and, until recently in urban areas. In 1994, the Central Valley Water Board, added the lower portions of the Sacramento and Feather Rivers to the CWA 30d(d) list due to toxic concentrations of these pesticides in winter storm runoff from urban areas and orchard dormant sprays. In the early 1990s toxic pulses of diazinon from these rivers were observed throughout the Delta. This map shows the location of the Sacramento and Feather Rivers and orchards (marked in yellow) which were significant users of diazinon.

Over the next decade, state and federal resources supported intensive stakeholder efforts that involved the SRWP (Sacramento River Watershed Program), UC, agricultural organizations, DPR, USEPA, and MANA (the manufacturer of Diazinon). In 2003, the Central Valley Water Board adopted a Basin Plan amendment including a TMDL and water quality objectives for diazinon. That same year, US EPA and pesticide manufactures developed local label restrictions. DPR adopted dormant spray regulations in 2006. Significant public funding, such as from US EPA CWA 319 and CALFED, has been provided to support efforts addressing this impairment.

Non agricultural uses of diazinon were phased out nationally by USEPA in 2004 and concentrations in urban discharges have declined rapidly since then. Since the adoption of the Basin Plan Amendment, agricultural dischargers, through the Sacramento Valley Agricultural Coalition, have implemented the Basin Plan monitoring and implementation requirements for diazinon in these Rivers. Recent samples collected on the Sacramento River and the Feather River show that the levels of diazinon in the Sacramento River are well below the water quality objectives. Based on these data, the Central Valley Water Board recommended, and EPA recently approved the removal of the diazinon 303(d) listings for these rivers. There remain concerns with replacement products, such as pyrethroid pesticides, which are causing some localized toxicity, but these pesticides do not appear to be causing toxicity of the scale and magnitude that we saw from diazinon in the early 1990s. We are working at addressing potential toxic effects of other pesticides, using what we've learned in addressing diazinon. The success in reducing diazinon in the Sacramento River has recently been documented as a Nonpoint source and Watershed success story by USEPA.

[Notes: More information, US EPA success story:

[http://www.epa.gov/owow/NPS/success/state/ca\\_sac.htm](http://www.epa.gov/owow/NPS/success/state/ca_sac.htm)

Measure W:

<http://www.epa.gov/region9/water/watershed/measurw/feather-sac/index.html>]

# Smart Sprayer Technologies



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The next two slides show one example of the type of management practices that were implemented to reduce pesticide runoff. In this case, a ten year project that was partially funded by the Board developed new technologies to improve pesticide sprayer efficiency.



**TABLE 1. Saving comparisons for conventional versus smart-spray applications**

Orchard	Application	
	Conventional	Smart spray*
	<i>gallons/acre (liters/hectare)</i>	
Prunes (Chico)	100 (935)	85 (794)
Almonds (Modesto)	100 (935)	78 (729)
Prunes (Oroville)	100 (935)	60 (561)

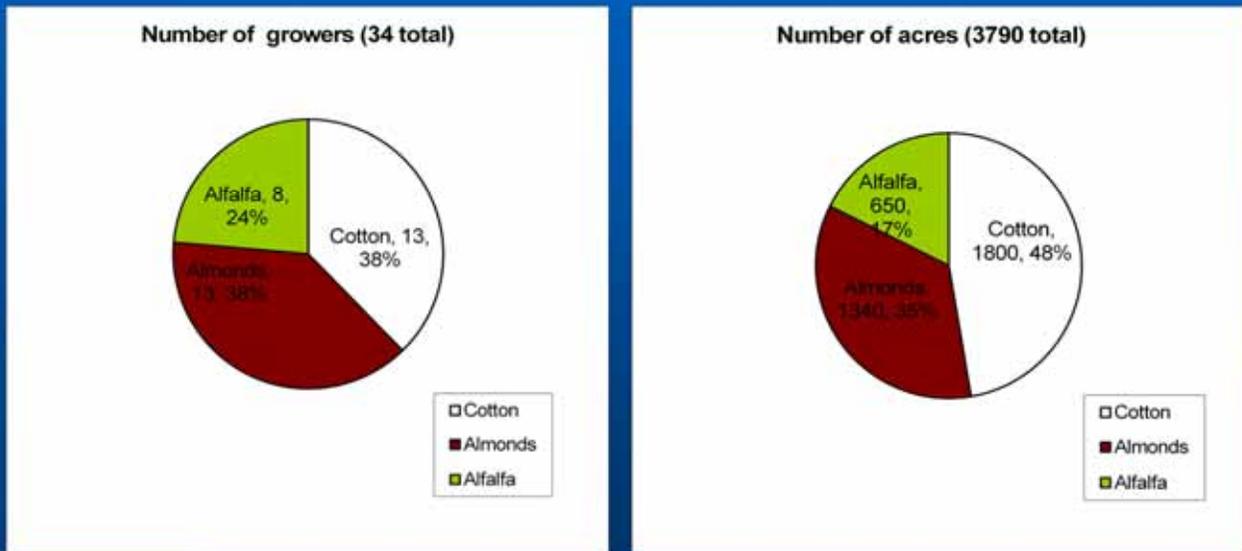
\* Application rates determined from on-board electronic system of sprayer.

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One kind of smart sprayer was this commercial sprayer that was retrofitted with a target-sensing spray system. These smart sprayers only spray where a tree is detected. Smart sprayers skip bare areas and areas where new trees are planted, significantly reducing the amount of spray deposited to the ground.

These smart spray applications enabled growers to spray up to 40% less pesticide compared to conventional sprayers, and pesticides in the runoff water were 54% lower.

# San Joaquin Sustainable Farming Project



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Another example of a management strategy that has been implemented to reduce pesticides is the Sustainable Farming Project. The San Joaquin Sustainable Farming Project is making a difference to growers as well as to the health of local communities and watersheds. Growers are able to reduce their use of chemicals, save money by avoiding overspraying, and implement sustainable practices that make them better stewards of the land.

This project began in 2010 with 10 cotton growers, 9 almond growers, and 8 alfalfa growers totaling 2,499 acres of farmland. In 2011, additional growers joined the project, bringing the number of acres covered to 3,790. Farmers who enrolled in the project used no diazinon or chlorpyrifos, reducing use by an estimated 7000 lbs of chlorpyrifos alone. Weekly field surveys accounted for pests as well as beneficial insects. Growers used a “whole systems” approach to assess their farms. The growers were provided technical support to make informed choices and offered practical, reduced risk alternatives. The project also created the marketing venue “more environmentally responsible” (but not organic), that has been desirable to companies like the Gap and Prana



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These are some of the practices implemented to reduce pest impacts.

(top left) Annual habitat is planted to attract beneficial insects, serve as a trap crop, and provide food and nectar for beneficial insects.

(top right) Example of strip cut alfalfa. The strip is left to encourage the lygus bugs to stay in the alfalfa (that they prefer) and not to move to adjacent cotton.

(center) Pheromone mating disruption trap in SJSFP enrolled almond orchard.

(bottom left) Cotton was planted among drip irrigation. It followed the tomato rotation, with the drip tape left in the ground and the cotton planted into the beds.

(bottom right) Sweep net used to capture pests and beneficial insects in all three crops. Field surveys cost \$160/month compared to \$400/month hiring licensed, independent pest control advisors, saving growers \$240/month.

# Whiskeytown Lake 303(d) delisting for coliform bacteria



- Dog restrictions
- Toilet and washing facilities
- Limit parking to limit bathers
- Water quality monitoring

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Another water body that was impaired and now has been removed from the impaired water body list is Whiskeytown Lake. Whiskeytown Lake is a popular swimming spot in the Whiskeytown National Recreation Area located in the Clear Creek watershed of Northern California. Water sampling in the late 1980s showed fecal coliform contamination above water quality standards at some of the more popular beaches. Potential sources of fecal contamination included large numbers of bathers, animals (pets, bears and geese), and unsatisfactory waste management.

Based on the water sampling results and multiple sources of fecal contamination, popular Whiskeytown Lake swimming beaches were placed on the Clean Water Act 303d list of impaired waters for fecal contamination in 1990.

In order to address the problem, National Park Service started a long term water quality monitoring program and developed and implemented improved management measures to address the many sources of fecal contamination. During this process starting in the 1990s, Water Board staff worked collaboratively with Park staff and provided input on monitoring and techniques to reduce the nonpoint source pollution.

The following measures were implemented at popular swim beaches:

- Visitation at impacted beaches was capped.
- Parking capacity limits and user fees have reduced and dispersed park visitors.
- Sanitation facilities were improved. Toilets and waste water facilities were upgraded, including new pipelines, new toilets, washing features and a new waste-water treatment system with a 5 million gallon tank. Floating toilets were installed for boaters.
- Dogs were banned from main swimming beaches.
- Solid waste management was improved.
- Wildlife-proof garbage cans were installed, which reduced numbers of bears and raccoons at the beach and reduced scattering of human waste by wildlife.
- Contours of the inner beach at Brandy Creek were modified to provide enhanced water circulation. Swimmers were barred from an area with restricted water circulation.
- Public information flyers regarding protection of water quality (use of swim diapers for kids and admonition against feeding geese) were created and distributed.
- Clean up of waste on beach was improved.

Based on the management measures implemented and the demonstrated reduction in fecal coliform contamination that was confirmed by monitoring, Whiskeytown Lake was delisted in 2011. This success story is a result of sustained efforts by the National Park Service to improve management and monitoring of the popular swim beaches, and effective collaboration between the Park Service and the Central Valley Regional Water Quality Control Board.

# Basin Planning in Five Years

- CV-SALTS
- MUN in POTW Receiving Waters that are Agricultural Drains
- Aquatic Life Beneficial Uses and Water Quality Objectives for West Squaw Creek

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The previous slides highlighted accomplishments and strategies that were implemented in the past five years. In the next five years, the Board can expect to see basin plan amendments on these topics.

# Basin Planning in Five Years

- Variance Policy
- MUN in Groundwater - Royal Mountain King Mine
- Drinking Water Policy

1 December 2011 Regional Board Meeting

Continued from Slide 31

# TMDLs in Five Years

- **Implement TMDLs**
  - **Mercury in Delta, Clear Lake, Cache Creek**
  - **Nutrients in Clear Lake**
  - **DO in Delta**
  - **Se and Salt in San Joaquin River**

1 December 2011 Regional Board Meeting

The TMDL program the focus for the next 5 years will be on implementing TMDLs we have previously adopted and adopting new TMDLs to address high priority impairments.

Previously adopted TMDLs that will require significant oversight in the next 5 years include the mercury TMDLs for the Delta, Cache Creek and Clear Lake; nutrients in Clear Lake, pesticides in the Delta and tributaries, dissolved oxygen in the Delta and selenium and salt in the San Joaquin River. As was indicated previously, numerous water bodies have recently been delisted as a result of improvements in water quality for some pesticides.

# TMDLs in Five Years

- **Adopt TMDLs**
  - **Chlorpyrifos, Diazinon, Pyrethroids – Valleywide**
  - **Statewide Program to Control Mercury in Reservoirs**
- **Implement Innovative Approaches**

Agenda Item #

1 December 2011 Regional Board Meeting

In the next 5 years, we expect to adopt TMDLs and control programs for chlorpyrifos, diazinon and pyrethroid pesticides that will apply basically in all valley floor waters. These TMDLs will address 100 current impairments and provide the framework for addressing future listings. In addition, Region 5 is taking the lead in coordinating a multi region/State Board effort to develop a statewide mercury TMDL control program for reservoirs. This will address 74 reservoirs statewide, including 46 in Region 5.

We are exploring innovative approaches to include in control programs and TMDLs so when new impairments are identified they will be automatically addressed.

# Innovative Statewide Mercury TMDL

- **Region 5 to lead**
- **70 reservoirs**
- **Team formed**
- **Work plan**



1 December 2011 Regional Board Meeting

One innovative approach that is being implemented on a statewide basis is the Statewide reservoir mercury control program. There are 269 water bodies in the State that are listed as impaired because fish contain levels of mercury that pose a risk for people and wildlife that consume the fish. 172 of the listings are for lakes, reservoirs and stream segments. The rest are for bays, estuaries, sections of coastline, and wetlands. Regional Boards have already developed mercury control programs (TMDLs) for about 10 reservoirs and stream segments.

Executive Management at State Board and the Regional Boards are interested in seeing that all or most of the mercury impaired water bodies are addressed in a timely and efficient manner and has asked Region 5 to take the lead in forming a multi-region/State Board team to work collaboratively to develop and implement a statewide control program. We have formed a team and have started putting together a roadmap for moving forward with a project that will focus on mercury impaired reservoirs. Statewide, there are about 74 and about 46 are in Region 5.

The idea here is to use the science and knowledge that has been developed in previous TMDL efforts in California and nationwide and apply this to our reservoirs. Our initial goal is to try to have a control program in place in the next couple of years. It is anticipated that that the control program will have an adaptive management component to take into account uncertainties that will undoubtedly be identified as the control program is developed and any new science that comes to light.

# Innovative Approach to Pesticides

- UC Davis pesticide criteria
- Multiple waterbodies
- Coordinate with DPR and US EPA



1 December 2011 Regional Board Meeting

Regional Board TMDL staff are taking an innovative approach to addressing pesticide issues in our Region in a comprehensive manner, using what we have learned from previous successful efforts.

#### UCD Pesticide Criteria

The Regional Board has contracted with UC Davis to develop methodology and criteria for several pesticides. These criteria are not region specific, and can be used by other Regional Boards, or even statewide, to establish pesticide water quality objectives (through basin planning).

These criteria were prepared using a new UC Davis methodology for derivation of pesticide water quality criteria. This work overcomes a major obstacle to addressing pesticides – the amount of information submitted during the pesticide registration process at US EPA in many cases is insufficient to use the US EPA methodology for determining water quality criteria. The UCD methodology allows development of criteria with existing data. The UCD methodology has been peer reviewed and was recently published.

Using the UCD methodology, final criteria have been developed for seven pesticides – including three pyrethroids - with two additional pesticide criteria are under development. We are also contracting with UCD to develop a sediment criteria methodology.

#### Many waterbodies at once

Another innovative approach is that we will propose establishing pesticide objectives and implementation requirements for over one thousand waterbodies rather than waterbody by waterbody. Having numeric water quality objectives will provide a more clear, well established and adopted benchmark than the narrative water quality objectives currently used to address most pesticides. We are currently using this approach in developing objectives and an program of implementation for diazinon and chlorpyrifos, and plan to take a similar approach with other pesticides. This approach will address multiple 303(d) listings/TMDLs at one time and is much more efficient than basin plan amendments that only address one or two waterbodies at a time.

#### Coordination with Dept of Pesticide Regulation and US EPA

TMDL staff are coordinating with California Department of Pesticide Regulation and US EPA's Office of Pesticide Programs on efforts such as re-registration of pesticides. These agencies, which regulate pesticide use, can help address pesticide issues before they enter in our waterways. Therefore it is important that they are made aware of water quality problems resulting from current pesticide uses, and the resulting environmental and economic impacts. We have been working with a diverse group of stakeholders, including the regulated community, to encourage closer coordination between water quality regulators and these pesticide use regulators through such efforts as DPR's Surface Water Regulations and US EPA harmonization efforts between their Office of Water and Office of Pesticide Programs.

# Delta Coordination



DELTA STEWARDSHIP COUNCIL  
INDEPENDENT SCIENCE BOARD



1 December 2011 Regional Board Meeting

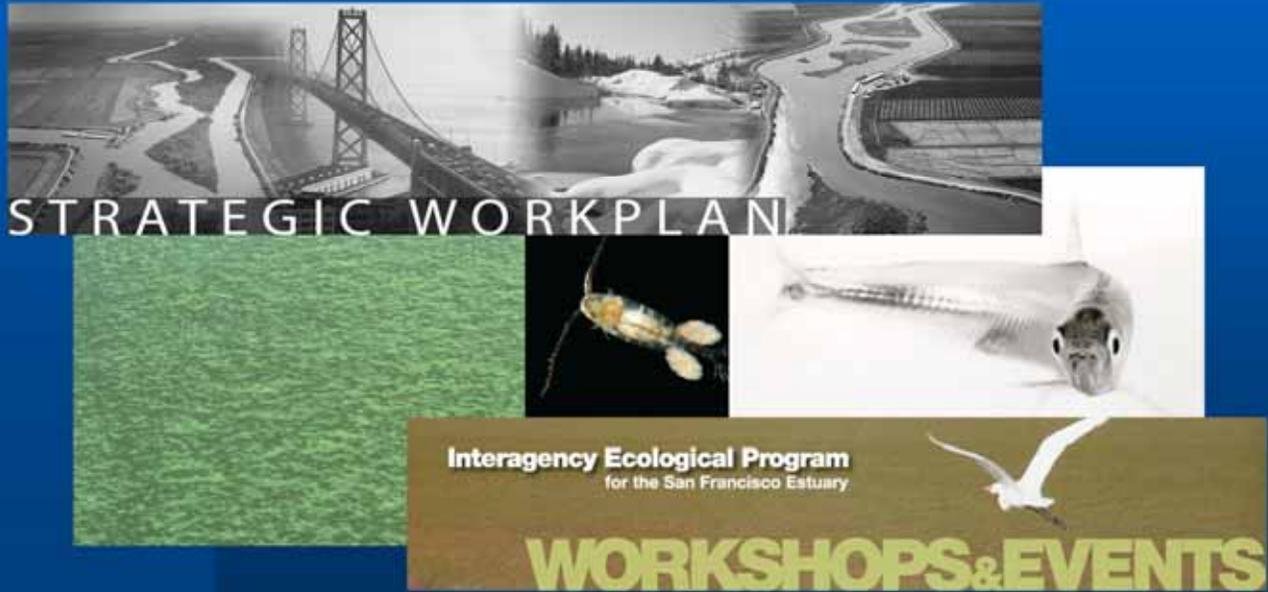
Slide 37

There are numerous efforts underway to address a host of issues in the Delta related to water quality and beneficial use protection. Staff are involved in many of these:

- The Legislature created the Delta Stewardship Council to adopt and implement a comprehensive management plan for the Delta to further the co-equal goals of restoration and water supply reliability. Staff continue to coordinate and comment on drafts of their Delta Plan, and once finalized, the Delta Plan recommendations will guide the update of our Bay-Delta Strategic Work Plan.
- The Delta Independent Science Board is reviewing the application of science and the effectiveness of science practices throughout the Delta, and we have been providing them with information and participating in their meetings to help them understand the various programs within the Water Boards.
- Coordination with the Interagency Ecological Program and Ecosystem Restoration Program includes reviewing and commenting on contaminant-related proposals and studies, and integrating their studies with our contracts and grants where possible, as well as facilitating coordination with other groups.
- Staff actively tracks Bay-Delta Conservation Plan meetings and comments on documents as they become available.
- Nutrient Numeric Endpoints are being developed by State Board and staff is attending meetings for each of the various efforts, so we're already well engaged before the NNE for the Delta is developed.

All coordination efforts with these groups will continue over the next five years and the degree of involvement our staff has will largely depend on resources and management priorities.

# Delta Coordination Water Board



1 December 2011 Regional Board Meeting

Slide 38

So, considering all the various efforts that are underway on the Delta, the Central Valley Regional Board, along with the San Francisco Bay Regional Board and State Board, determined that it was important that we coordinate our efforts on Delta work. We developed a Strategic Work Plan in 2008 and have been working to achieve Water Board goals identified in the work plan through a coordinated and integrated approach. The workplan included several elements, including commitments to:

- coordinate efficiently with the other ongoing Delta efforts that were mentioned in the previous slide
- continue to work on high priority TMDLs, such as pesticides, mercury, salt, DO and selenium
- evaluate the effects of ambient ammonia concentrations on delta smelt and algal primary production through our own studies and helped convene two IEP workshops on ammonia that evaluated and coordinated with other investigations to further understanding of ammonia, nutrients, and their effects in the Delta)
- evaluate, develop, and implement a Comprehensive Delta Monitoring Program

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- evaluate, develop, and implement a Comprehensive Delta Monitoring Program
- review and implement Southern Delta Salinity Objectives and San Joaquin River Flow Objectives
- review of the Bay-Delta Plan

The Work Plan was to be implemented within 5 yrs, and we've achieved or initiated most of the goals that were outlined. We have begun discussions to draft an updated version that integrates Delta Plan recommendations and other relevant issues from coordinating agencies.

# Delta Regional Monitoring Program



1 December 2011 Regional Board Meeting

One of the elements the Delta Strategic Workplan that was mentioned in the previous slide was to develop an RMP. Staff are working internally and with stakeholders to develop a more effective, Regional Monitoring Program for the Delta that integrates monitoring across internal programs as well as with monitoring conducted by others. The goal is to better characterize the health of the Delta through a long-term, sustainable monitoring program that addresses the interests and needs of all stakeholders. Along with more coordinated and effective monitoring, we annually present water quality evaluations in the Pulse of the Delta, the main outreach document of the Delta RMP. We are working with the California Environmental Data Exchange Network to make Water Board data more easily accessible and the CA Water Quality Monitoring Council to make Delta RMP evaluations and reports more publically available through its My Water Quality Portals. We plan to fully implement the Delta RMP within the next two years.

# Groundwater Quality Programs

Groundwater Quality Programs

# WDR Program

- **1,500 facilities**
- **1,100 WDRs**
- **300 applications**
- **25 Staff**



1 December 2011 Regional Board Meeting

The WDR program broadly encompasses all discharges of waste to waters of the state and which are exempt from the regulations in Title 27 and that are not subject to federal NPDES permitting. The largest part of our regulated dischargers fall into the program. Some of the industries that are really in the program, specifically confined animal facilities and irrigated lands, are so large in themselves that they are handled as separate programs.

There are over 1,500 dischargers regulated in the program (excluding confined animal facilities and irrigated lands). Over 1,100 are under individual or general orders. This represents about half of the program's dischargers in the State. These dischargers are regulated through a combination of individual WDRs, state-wide and region-specific general orders, and waivers of WDRs. There are around 300 applications on file for new or revised WDRs. With a current staffing level of 25 people for all permitting, compliance, and enforcement, we need to find other ways besides individual WDRs effectively regulate dischargers in as efficient manner as possible.

# WDR Program Objectives

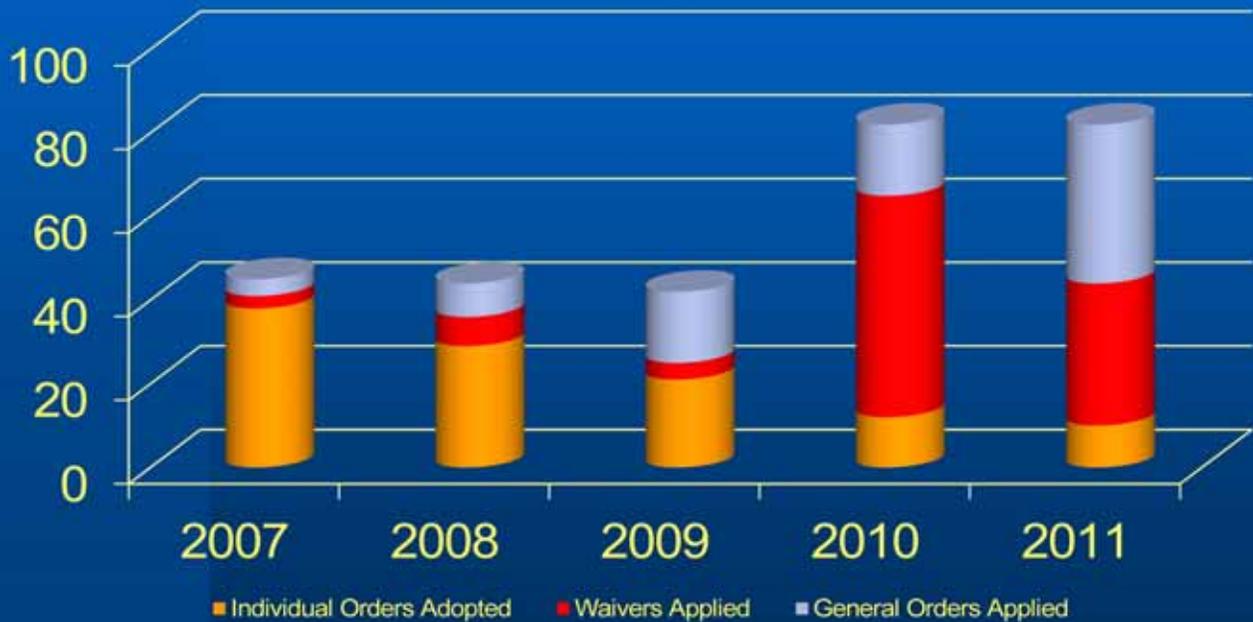
- **Reduce backlog of applications**
- **Update old WDRs that are not effective**
- **Fair and consistent regulation and enforcement**



1 December 2011 Regional Board Meeting

The program objectives are simple: reduce the backlog of applications, update old WDRs that are not effective in protecting water quality, and assure fair and consistent regulation and enforcement.

# WDR Program



1 December 2011 Regional Board Meeting

This slide shows two things: number and type of regulatory actions taken over time and the change in the trend in the type of regulatory action taken. The orange shows individual WDRs adopted during each year, the red show enrollment in waivers, and the blue shows the number of notices issued to individuals covered under general orders. I must report that it does show that there has been a reduction in number of individual orders adopted through the years. There are many factors as to why this has occurred, including reduced staff and complexity of WDRs as a result of some of the challenges on them and directives received from the State Water Board. But this slide also shows the increased use of general orders and waivers. The number of dischargers enrolled in general orders/waivers doubled from 2010 to 2011. For us to be successful, we need to build on this and develop more general orders to regulate the bulk of the dischargers, and concentrate on writing individual orders only for those complicated discharges that pose the greatest threat to water quality.

# WDR Program General Order Development

- **New State-wide General Orders**
- **Region Wide General Orders**



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Slide 44

The State Water Board has formed a new unit to work on state-wide general orders. Our staff is working with this unit as it develops these orders. Staff is also reviewing the need for other general orders, either for applicability state wide or within the region. If the need is state wide, staff will propose the general order for consideration at the State Water Board, otherwise it will be coming to you for consideration.

State Board has formed a Steering Committee of State and Regional Board managers to review and improve our WDR program. I serve on the Steering Committee.

# WDR Program

- **Develop uniform template for WDRs**
- **Language Farm**
- **Information Needs Lists**
- **Checklists**

1 December 2011 Regional Board Meeting

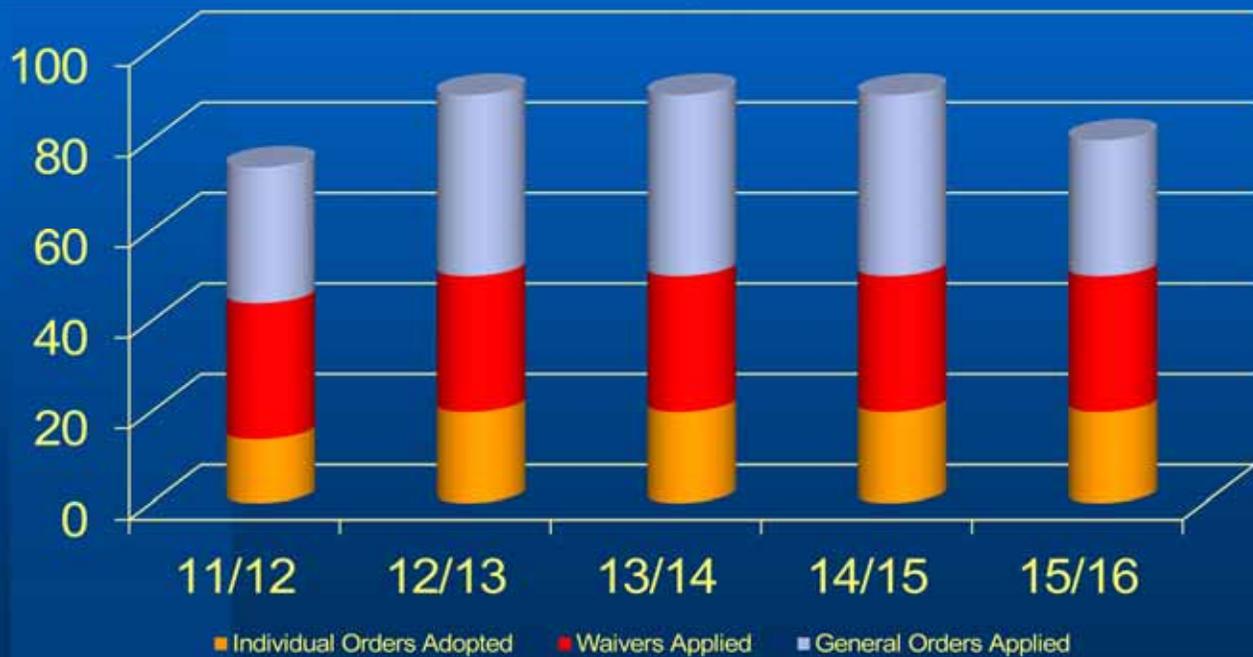
To increase efficiency when drafting individual WDRs, staff is developing several tools to streamline the process and ensure that all regulatory requirements are covered. Staff is developing a uniform template for WDRs so that all individual WDRs have a similar look and staff consider all required information. Staff is also developing what it calls a Language Farm. This Farm will be a repository of findings and discharge requirements so that, in similar circumstances, orders will contain similar requirements expressed in a consistent manner.

Staff is reevaluating Information Needs Lists it provides to applicants in an attempt to ensure that submitted Reports of Waste Discharge contain all the information staff needs to draft waste discharge requirements for your consideration.

And staff is developing checklists for the review of Reports of Waste Discharge and the processing of waste discharge requirements to ensure that issues are identified and resolved early in the process.

Implementation of these tools should significantly reduce the time necessary to draft tentative WDRs for your consideration.

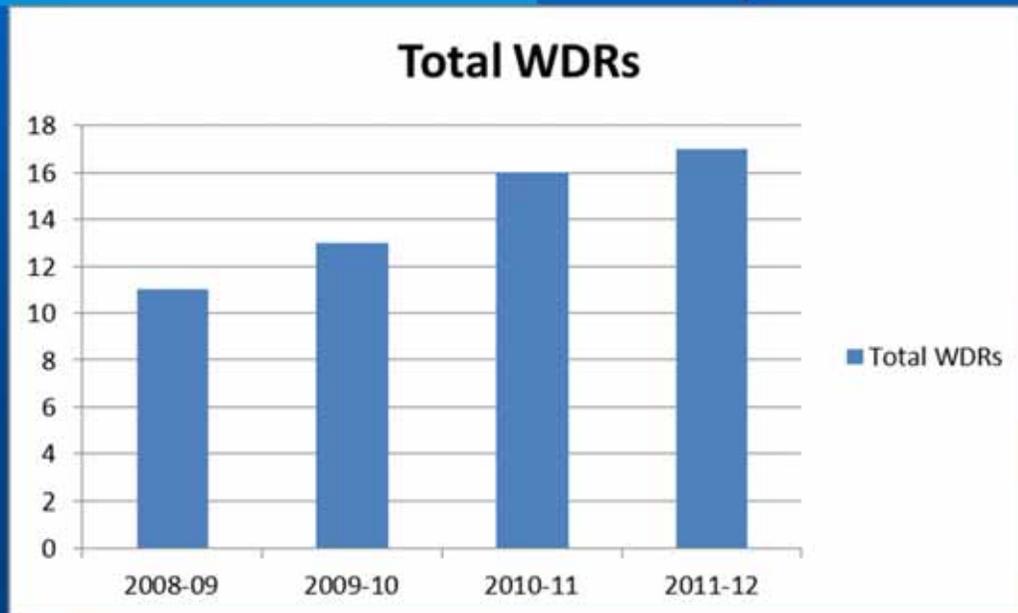
# WDR Program



1 December 2011 Regional Board Meeting

By effecting these measures, we will see more dischargers under effective orders. We will also be able to concentrate efforts on individual orders to those greatest threat or complex discharges that need the most attention. And, provided there is not a great upswing in number of applications received each year, we should be able to reduce the backlog to less than 50 applications at any time.

# Title 27 Program Increased WDRs Output



1 December 2011 Regional Board Meeting

The Title 27 regulatory program has, as its primary goal, to contain wastes so as to prevent water quality impacts both to surface water and groundwater. The program encompasses a variety of facilities (approximately 350 in the Central Valley Region) that discharge waste to land, including landfills (i.e., active/receiving waste, closed and unregulated); industrial surface impoundments; waste piles; mines (active, recent mines and abandoned), composting facilities and oil fields. About 40% of program resources go to oversight of active and closed landfills under WDRs, while 20% go to mining, and 15% to oil field work.

- The Title 27 program has been very successful over the past several years in managing the Central Valley Water Board sites regulated by this program:
- We have closed landfills that have been long time problems, expanded other landfills in compliance with Title 27 waste containment regulations, and provided oversight for over 350 other Title 27 facilities.
- In Fiscal Year 2010-2011 we completed 16 WDRs, 220 inspections and over 300 report reviews.
- We have been able to maintain consistent regulatory oversight of landfills and have continued to work hard at updating WDRs consistent with State Board's OPM. It has been difficult to maintain this level of effort because the program budget continues to shrink over time.

This slide illustrates that, without additional resources, the Title 27 program has increased its output of WDRs by 70 percent since 2008. This increase represents an effort to reduce the WDR backlog. The Title 27 Program plans to maintain this effort over the next five years, but it will be difficult to continue to increase the WDR output without further resources.

# Land Disposal Program - Mines

- **Increased oversight**
- **60 mines**
  - 37 legacy mines
  - 27 active mines
- **Additional staff resources**



1 December 2011 Regional Board Meeting

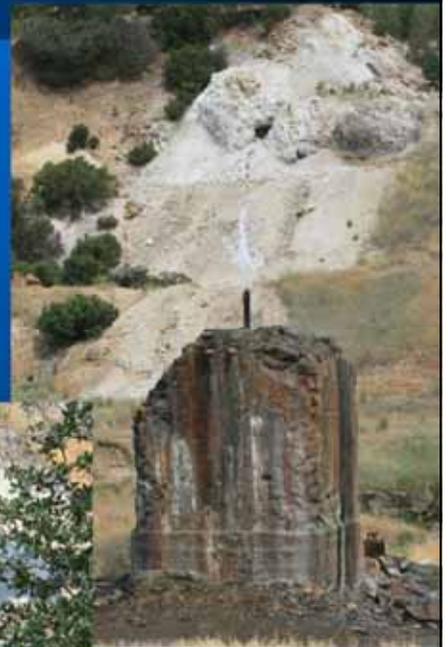
The oversight of mines under this program has expanded over the past five years. Past and recent mining operations are major contributors of metals and salts to surface and groundwater throughout the Central Valley Region. Increases in value of precious metals have caused an increase in active mining. Resources for characterization and cleanup of legacy mining operations are limited. This resource limitation also hinders our ability to identify and find responsible parties

Board staff is presently working on approximately 65 mine sites with 37 of the mines being legacy mines and 27 being recent mining operations. Twenty-six (26) of the legacy mine sites have some type of order on them. This includes Cleanup and Abatement, Cease and Desist and 13267 Orders, NPDES permits or they are Superfund Sites. Currently all 27 recent mining operations have either WDRs or a stormwater permit.

Board staff is currently researching the possibility of developing a cost recovery system for mine sites, which will hopefully include more staff resources to identify past mine operators to share in the responsibility for mine cleanup.

# Mines – Next Five Years

- **Prioritize mine work**
- **WDRs**
- **Responsible party searches**
- **Good Samaritan mine remediation**



1 December 2011 Regional Board Meeting

The Title 27 mine program has had many small to large successes over the past several years. For The Title 27 mine program has had many small to large successes over the past several years. For example, this past year we have signed an agreement worth 1.2 million dollars with Homestake Mining Company to remediate much of the mine waste along Sulphur Creek. This was accomplished by Staff identifying the mine waste, doing extensive responsibility search and naming the parties in an Order. We are planning to do more of the same and over the next five years we will:

Continue identifying mine sites that are degrading waters of the State and prioritize mine work on worst case first bases.

Keep working on WDRs for new and active mine sites.

We have received funds to do responsible parties searches that will assist staff identifying mining companies responsible for water quality impairments.

Continue to work with groups proposing good samaritan mine remediation

# UST Cleanup Program

- **812 RB cases**
- **788 Local Agency cases**
- **Over 140 closures in each FY 09/10 and 10/11**



1 December 2011 Regional Board Meeting

There are two main programmatic elements for the UST Program – leak prevention and detection which is a local program and spill clean-up which is evenly split between Regional Board and local lead cases.

Within Region 5 we have approximately 812 Regional Board lead cases. These represent just under 24% of the Regional Board lead cases State-wide.

In addition, there are approximately 788 cases under local agency lead. Board staff meet and confer with local agencies to discuss these cases. Often the more complicated cases and those with recalcitrant responsible parties are turned over to the Region.

Moving cases through to cleanup remains a high priority. Last year, cleanup was completed on 142 Board lead cases and No Further Action Required letters were issued to the responsible parties.

In addition 59 sites began remediation during the past fiscal year.

Currently approximately 60% of our cases have a status of “Remediation” or “Verification Monitoring”.

# UST Cleanup Program Percentage Closed



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Our UST program has increased our rate of closures. This graph shows the percentage of our open cases at the beginning of the fiscal year that have been closed each of the last 6 years. As you can see we have increased our rate of closures from approximately 5% each year to approximately 14% each of the last two years. This year we are aiming to close over 16% of our open cases.

# UST Cleanup Program

Open cases Closed UST cases



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The UST program constantly receives new cases, either due to new releases or because complicated and/or recalcitrant cases are referred to us from the local agencies. This graph shows the UST program is successfully reducing the number of open cases in our program. Since 2006 our Region has closed over 70% of our UST cases.

# UST Cleanup Program

Percentage of Regional 5 UST Closures and  
 Percentage of Statewide UST Resources



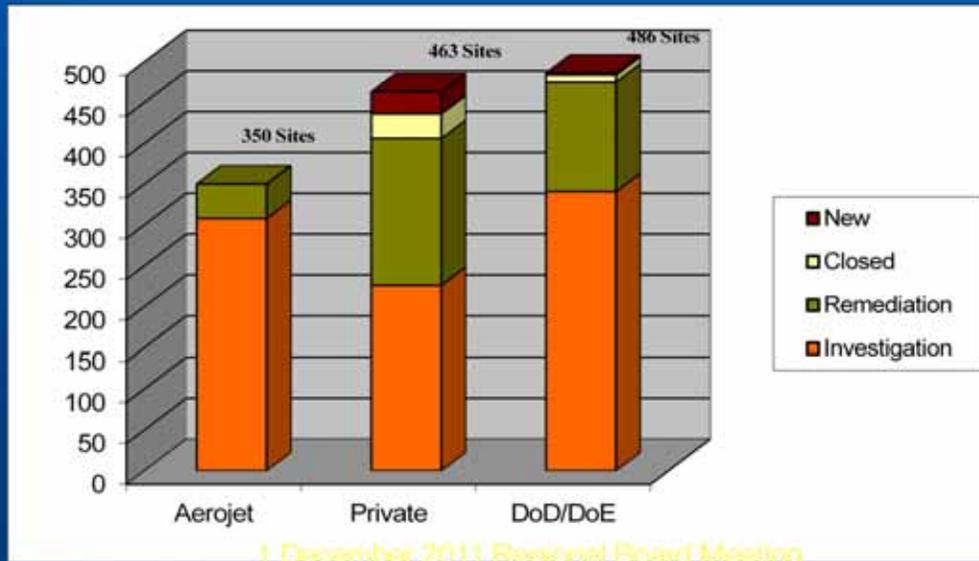
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Here is a graph showing our closures as a percentage of the statewide Regional Board total for the past 6 fiscal years. As you can see we have steadily been increasing our share of the total closures. During this period, the Central Valley Region had approximately 20% of the statewide UST resources. This past year we accounted for over 30% of the Statewide Regional Board closures. Our UST Cleanup program remains one of the most efficient in the State.

# Site Cleanup Program

As of June 30, 2011:

- Total number of active sites: 1,299
- Sites in active remediation: 356
- Sites Closed in 2010/2011: 39



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Slide 54

This slide shows some summary statistics for the Site Cleanup Program.

As of the end of the last fiscal year:

The program is working on about 1,300 sites.

463 of those sites are privately owned, 486 sites are at federal facilities, and there are 350 cleanup sites located at the Aerojet facility.

The graph shows the ratio of sites that are in the investigation and remediation phases of cleanup, in addition to the number of sites that were closed or newly added.

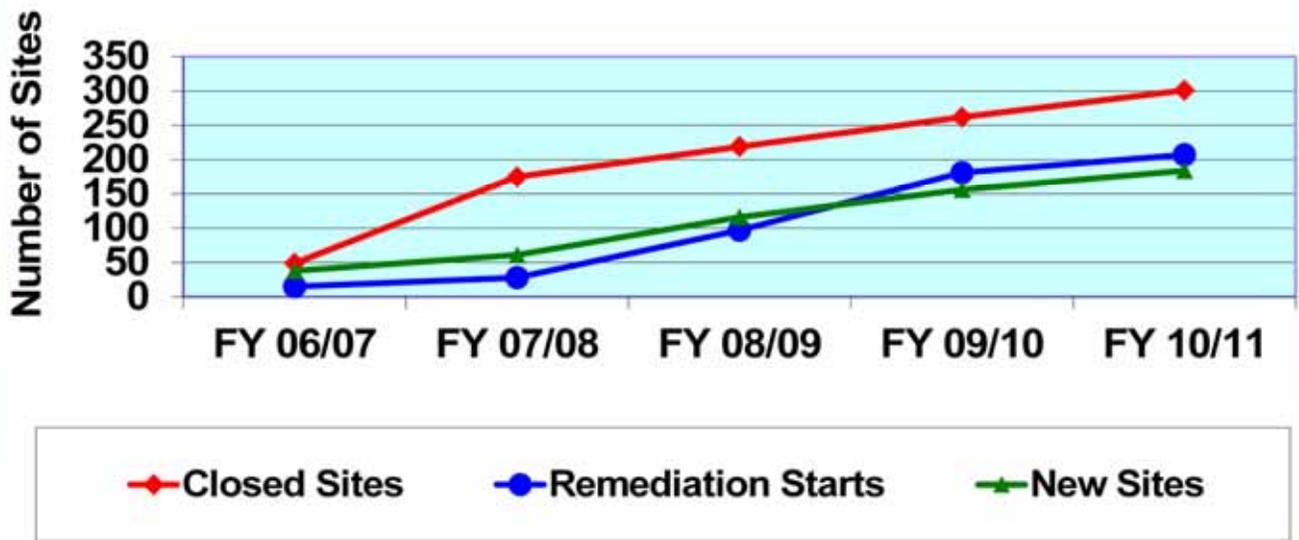
In the fiscal year 2010/2011, 356 sites were undergoing active remediation and 39 sites were closed.

Most of the sites in remediation are in the private sites/cost recovery program but good progress has been made in moving the federal sites forward through the "Superfund" process.

I would like to note that the Cleanup Program has 736 sites that are listed in the site database as open, but inactive. One of our work plan goals for the Cleanup Program is to address these backlog cases. As a first step in meeting this goal, we are having our student help review and categorize these cases.

# Site Cleanup Program

## Performance Indicators 2006-2011



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This slide illustrates the five-year summary for site closures, new sites, and sites that transitioned from the site investigation phase into remediation.

301 Site Closures

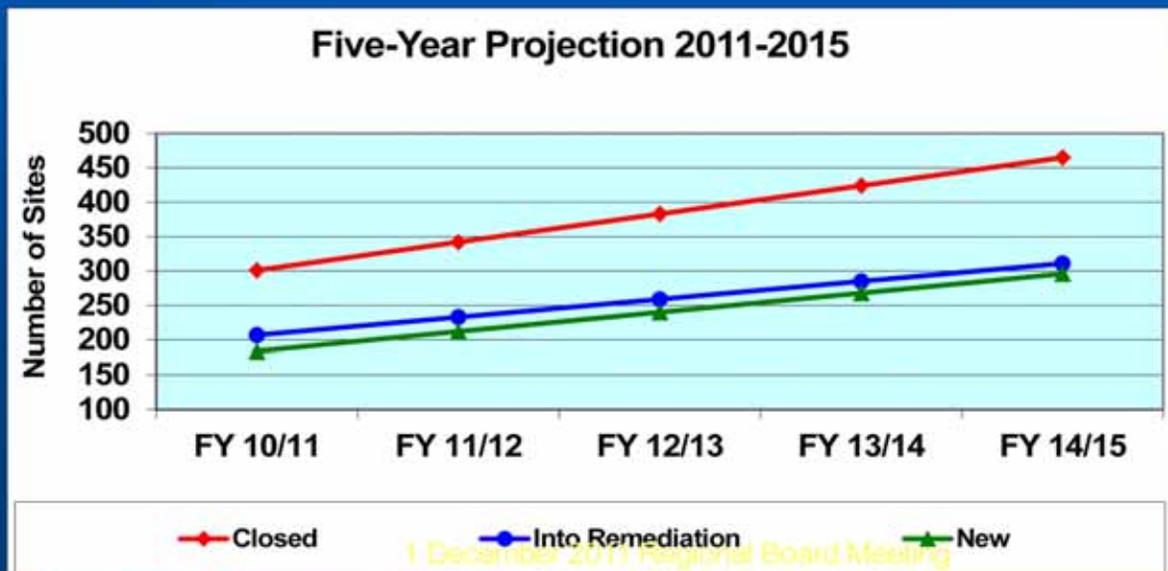
184 New Sites

207 Sites Transition to Remediation

# Site Cleanup Program

## Five Year Projection

- 164 Site Closures
- 104 Sites Transitioned to Remediation
- 112 New Sites



Slide 56

Over the next five years, the Cleanup Program will continue to achieve closures and begin cleanups at a number of sites. We are also projecting a continuing gap between the number of sites closed and the number of new sites in the program. That difference represents an opportunity to bring backlogged, inactive cases into the program.

# Site Cleanup Program

- Settlement Agreement – Hammer Field
  - Reimbursement for \$690,000



- Reuse/Green Energy – Frontier Fertilizer
  - Conversion of facility to solar power



Solar array to run the groundwater plume extraction treatment system.



Electrical resistive heating above ground infrastructure.



Slide 57

With over 1,000 active sites, the Cleanup Program has had numerous success stories over the past year. Some of these success stories merit special mention.

A long, ongoing legal dispute between the City of Fresno, the US Army Corps of Engineers, the National Guard, and The Boeing Company was been reached with the Regional Board and the Department of Toxic Substances Control. The Settlement Agreement provided for \$690,000 to reimburse the Board's past oversight costs and provides for future oversight cost reimbursements as well.

At the Frontier Fertilizer site of Davis, one of California's first "green" remediation projects was implemented. A 60 kilowatt solar array was installed at the site, which provides all of the energy required to power groundwater extraction and treatment system.

# Site Cleanup Program Cont'd

## Aerojet

- Treating over 19,000 gpm with 11 systems
- Green Remediation
  - 6 Megawatt Solar energy Facility
  - Recycling of treated groundwater
- Redeveloping 2,600 acres of the property for residential and commercial USES



1 December 2011 Regional Board Meeting

Another cleanup project that merits special mention is the Aerojet site.

Aerojet includes the 8,800-acre facility, along with 4,000 acres at the adjacent Inactive Rancho Cordova Test Site (IRCTS) and another 400 acres at the Cavitt Ranch. Aerojet has about 350 contaminated sites and the 5 groundwater plumes cover over 18 square miles.

There are 11 groundwater extraction and treatment systems at the site that treat over 19,000 gallons per minute of extracted groundwater.

Since 1990, over 840,000 pounds of contaminants have been removed from groundwater, which is equal to about 150 pounds per day.

At this time, over 85% of the groundwater plume is contained, with the remaining portions to be contained in the next 1-2 years.

Aerojet is also becoming a leader in the Green Remediation movement. In 2010, Aerojet completed the construction of a 6 Megawatt solar power facility, the largest industrial photo voltaic field in the State. The facility provides the majority of the power needed to operate Aerojet's groundwater extraction and treatment systems.

Aerojet is now providing treated groundwater to irrigate the Ancil Hoffman Golf Course, saving Sacramento County over \$100,000 each year and allowing Carmichael Water District to devote its water resources to other projects.

In addition, Aerojet is redeveloping 2,600 acres of the property for residential and commercial use.

# Site Cleanup Program McClellan

- Highest ranking Superfund site in country
- McClellan leading nation's effort in 'early transfer with privatized cleanup'
- Innovative process – redevelopment concurrent with cleanup
- To-date, 2,000 acres transferred



Low-Temperature Thermal Desorption at Parcel C-6

1 December 2011 Regional Board Meeting



Parcel C-6 Transfer Ceremony

There continues to be significant progress in the cleanup at the former McClellan Air Force Base. While the Board has been briefed about the environmental cleanup at McClellan in previous presentations, today I want to focus on the great strides the McClellan cleanup team has made in transferring the property back to the community.

McClellan is currently leading the Air Force's efforts towards 'Early Transfer with Privatized Cleanup', an innovative process using a multi-agency agreement that allows redevelopment to occur in conjunction with environmental cleanup. The process was used at the Parcel C-6 Project, which became the first successful privatized cleanup of a Superfund site in the United States. 62 acres, previously contaminated with PCBs, were cleaned up and are now available for immediate reuse.

The Air Force also transferred 600 acres to Sacramento County under the process. That property included a variety of industrial facilities, office buildings, a hotel, and housing now known as the McClellan Business Park.

Several other properties at the former McClellan Air Force Base have been transferred for reuse; 6.5 acres went to the Aerospace Museum of California and the 19.5 acre "Freedom Park" was transferred to the North Highlands Recreation and Park District.

Two property transfers have resulted in new schools. The Los Rios Community College and a Twin Rivers Unified School District school are nearing completion. To date, approximately 2,000 acres, out of approximately 3,000 acres of the former McClellan Air Force Base, has been transferred back to the community. Sacramento County estimates that when the former base is fully redeveloped, McClellan Park will have 35,000 jobs and generate over \$6.6 million per year in local property tax, and \$1.1 million per year in local sales tax revenue.

# Site Cleanup Program Cont'd

## Major Accomplishments in FY10/11:

- Emergency Response Activities
- ERMaC



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The Site Cleanup Program has achieved a number of other significant accomplishments, which are not related to specific sites.

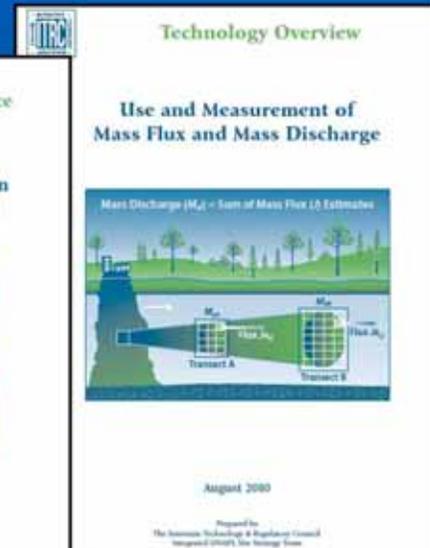
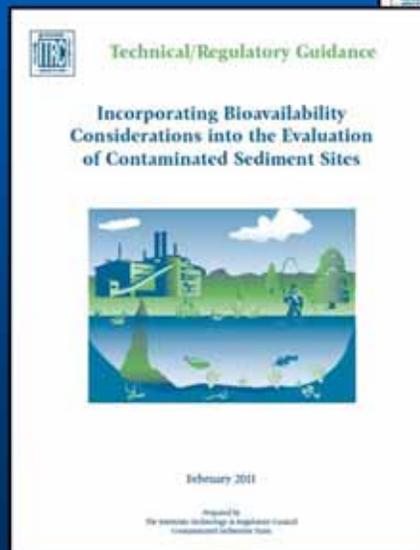
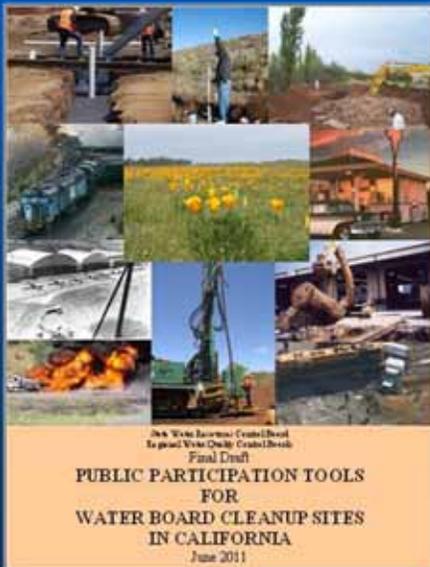
Region-wide, the program received 1,200 notifications of spills and emergencies, of which 270 required staff response actions. Some of the major emergency response projects in FY10/11 included assisting with the cleanup after the Roseville Galleria Mall Fire and the Auburn "49er" Fire.

At the invitation of the State Board, Region 5 staff serve on Cal/EPA's Emergency Response Management Committee, representing the State Board and all the Regional Boards. ERMaC is a state-wide inter-agency committee responsible for coordinating emergency response activities for CalEPA and all of its boards, departments, and offices. At ERMaC's request, Cleanup Staff prepared a guidance document for state-wide use, entitled "Stormwater Protection for Burn Sites". This document is intended for general use by government entities, corporations, and contractors to assist in preserving the quality of surface water while debris removal and reconstruction activities are conducted at burn sites.

Cleanup Program Staff, in coordination with OCC, recently reached consensus with the Air Force on a uniform list of standards for site cleanups. Reaching consensus with the Air Force was a major step in ensuring consistent application of standards at all Air Force sites in California.

# Site Cleanup Program

- Public Participation Tools
- Upgrade of Geotracker
- Technology Development through ITRC



1 December 2011 Regional Board Meeting

Cleanup Program staff also took a lead role in the development of a state-wide guidance document entitled "The Public Participation Tools". The Tools were prepared to assist project managers in the Cleanup Program in designing and providing a consistent and comprehensive approach to public participation during all stages of the Site Cleanup Process.

The Program also played a significant role in the redevelopment and upgrade of Geotracker, a database and Geographic Information System that provides on-line access to environmental data for responsible parties, public, and regulators.

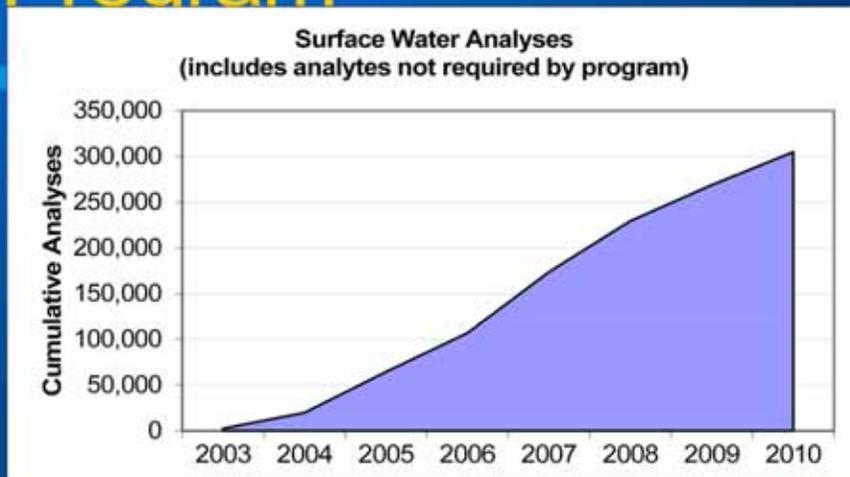
Finally, Cleanup Program Staff continued their active participation in technology development through their membership and active participation on the Interstate Technology and Regulatory Council. The Council has recently developed two guidance documents and staff participated in providing training on these subjects to a technical audience world-wide.

# New, Emerging and Evolving Programs

1 December 2011 Regional Board Meeting

New, emerging and evolving programs

# Irrigated Lands Regulatory Program



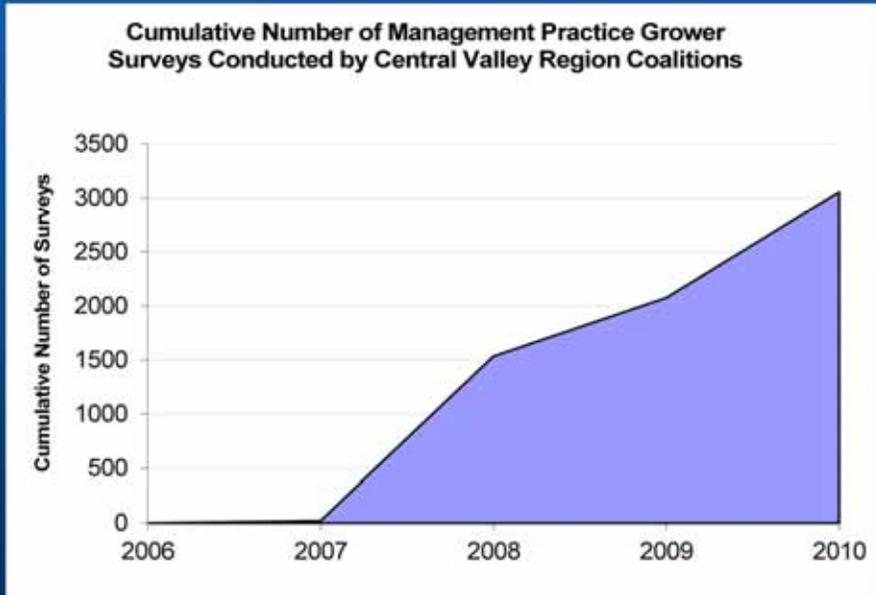
- **Management Plans**
- **Over 500 water body/parameter combinations**



1 December 2011 Regional Board Meeting

The irrigated lands surface water monitoring program currently focuses on receiving waters. Initially, little was known about receiving waters in many areas receiving agricultural discharges. As those initial assessment efforts were completed, follow-up monitoring focused on parameters, sites, and time periods in which exceedances of water quality objectives occurred. As a result of that monitoring over 500 management plans are in progress to further characterize sources and to implement management practices to address the identified problems.

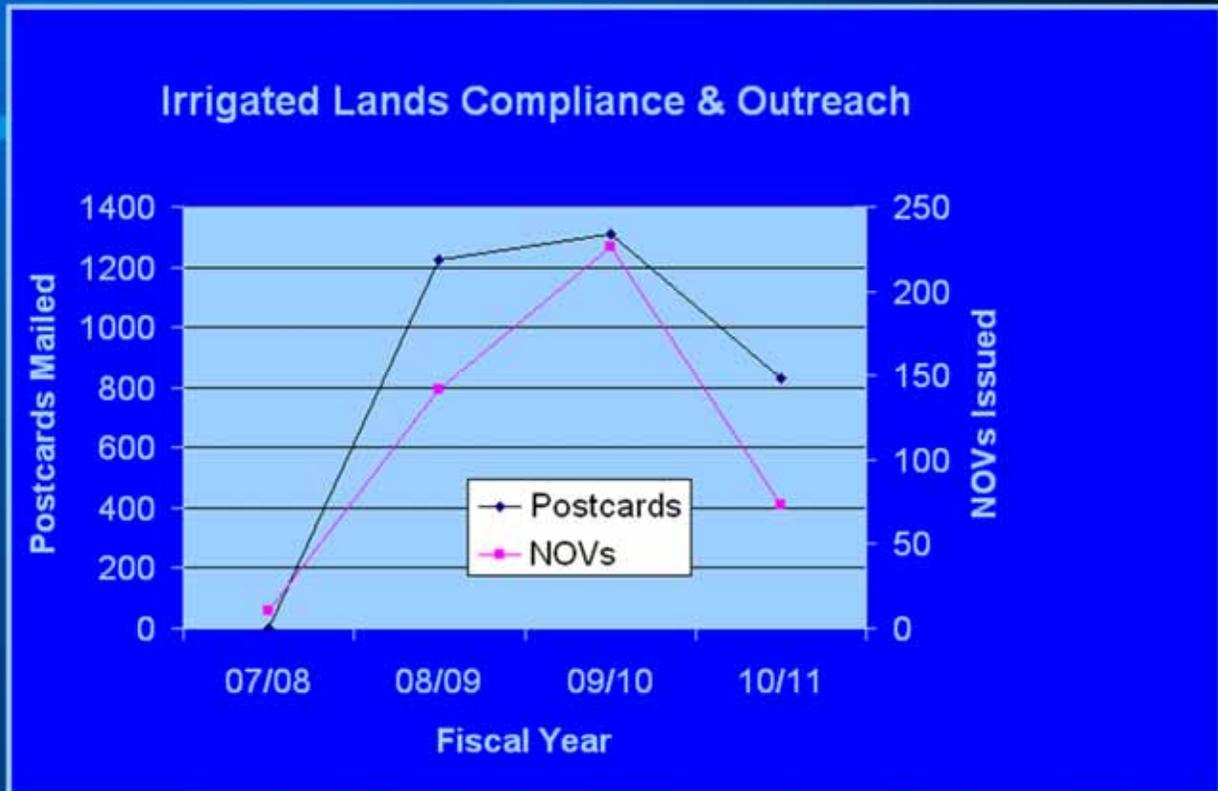
# Irrigated Lands Regulatory Program



1 December 2011 Regional Board Meeting

As a result of the implementation of management plans, Coalitions are beginning to survey their growers to identify practices that are being implemented. The surveys are focused on growers in priority watersheds or on growers likely contributed to water quality problems. The number of surveys completed has increased significantly in the last few years.

# Irrigated Lands Regulatory Program



1 December 2011 Regional Board Meeting

The staff of the irrigated lands regulatory program has a significant outreach program to try to ensure the 8,000-10,000 growers not in the program have the necessary regulatory coverage. Informal outreach via postcards is followed up by issuing 13267 orders to those who do not contact the regional board. Notices of violation are sent for failure to respond to the 13267 order. About 20% of growers receiving post cards eventually receive an NOV.

There is a reason for the drop shown in this graph, staff reductions (furloughs, hiring freezes), diversion of staff to assist in other areas of the program – EIR, preparing administrative record, and doing other types of enforcement.

Some say our waiver is meaningless and cannot be enforced, that simply is not true.

# Irrigated Lands Regulatory Program

## Stanislaus Almond Ranch ACL



Before



After

- Precedent-setting
- Effective coordination with DFG

1 December 2011 Regional Board Meeting

Some say our waiver is meaningless and cannot be enforced, that simply is not true.

The Board settled the largest complaint issued for discharges from irrigated agricultural land, with a final fine of \$300,000. Enforcement was coordinated throughout the multiple inspections conducted with the Department of Fish & Game. The enforcement actions have led to site improvements to improve erosion and sediment control as shown in these photos.

# Irrigated Lands Regulatory Program – Next 5 Years

- Groundwater quality monitoring
- Collect and assess management practice information
- Evaluate effectiveness
- Increase grower accountability and regulatory coverage
- Expand collaborative/cooperative relationships



1 December 2011 Regional Board Meeting

As the irrigated lands program transitions to addressing groundwater quality, the most significant issues that will be addressed in the next five years will include establishing the groundwater quality monitoring networks necessary to identify problem areas, assess trends, and evaluate effectiveness of practices. Efforts to improve the collection and assessment of management practice information, and evaluating the effectiveness of those practices, will be critical to understanding what growers are doing to protect water quality. One of the fundamental ways of increasing implementation of management practices is to ensure grower accountability to the Board and that all growers have the required regulatory coverage. We will maintain a strong enforcement presence to ensure accountability. To increase our effectiveness, we will work to expand our partnerships to avoid duplication of efforts and tap into other groups and resources working towards our common water quality protection goals.

# Confined Animal Facilities Program

- ~1.5 million cows
- ~1,400 dairies
- <100 to >10,000 cows
- ~112 lbs of manure/cow/day
- Imports from Chino Basin

1 December 2011 Regional Board Meeting

The heart of the confined animal facilities program is dairies. There are on the order of 1.5 million milk cows in the San Joaquin and Sacramento Valleys on over 1,400 dairies that range in size from less than 100 cows to more than 10,000.

Milk cows produce an average of 112 lbs of solid and liquid waste/day, which translates to over 31 million tons/year.

In addition to the dairy waste produced within the Central Valley, about 40,000 tons per year are imported from dairies in southern California, primarily the Chino Basin, due to prohibitions on the land application of dairy waste.

## Number of Dairies in Region



1 December 2011 Regional Board Meeting

The number of dairies has been declining over the past few years, from slightly over 1600 dairies in 2006 to about 1400 dairies today. It is predominately been the small, less economically competitive dairies that have closed, with newer, larger dairies taking their place. Although the number of dairies has declined, the total number of cows has not changed significantly.

# Confined Animal Facilities Program

## Dairy General Order

- Phased Approach and Outreach
- Nutrient Management Plan
- Salinity Report
- Waste Management Plan
- Monitoring
- Annual Reports



1 December 2011 Regional Board Meeting

The General Order for Existing Milk Cow Dairies was adopted in May 2007. At that time, approximately 1,500 dairies got coverage. The Dairy General Order required new and significantly more stringent requirements on these facilities, which, due to the complexity and cost were prioritized and phased in over time. Prior to the Dairy General Order, only a few dozen dairies were regulated.

One of the most significant parts of the General Order is the requirement for nutrient management plans, which serves as the primary tool to ensure dairy wastes are land applied in a manner that is protective of water quality. This is done by using a nutrient budget based on analyses of soils, manure, wastewater, irrigation water; and by applying nutrients in the amounts and at times that are appropriate for the crops being grown.

The General Order also requires a salinity evaluation; a waste management plan; monitoring; and submittal of an annual report.

# Confined Animal Facilities Program Compliance and Enforcement

- Progressive Enforcement
- Inspections
- Notices of Violation
- Administrative Civil Liability
- Formal Referral



1 December 2011 Regional Board Meeting

Since adoption of the Dairy General Order, staff has conducted more than 1,000 inspections, issued 600 notices of violation, issued 31 administrative civil liability complaints for either failure to submit reports or for off-property discharges, issued 2 cleanup and abatement orders, and referred 14 cases to the Northern California Environmental Task Force.

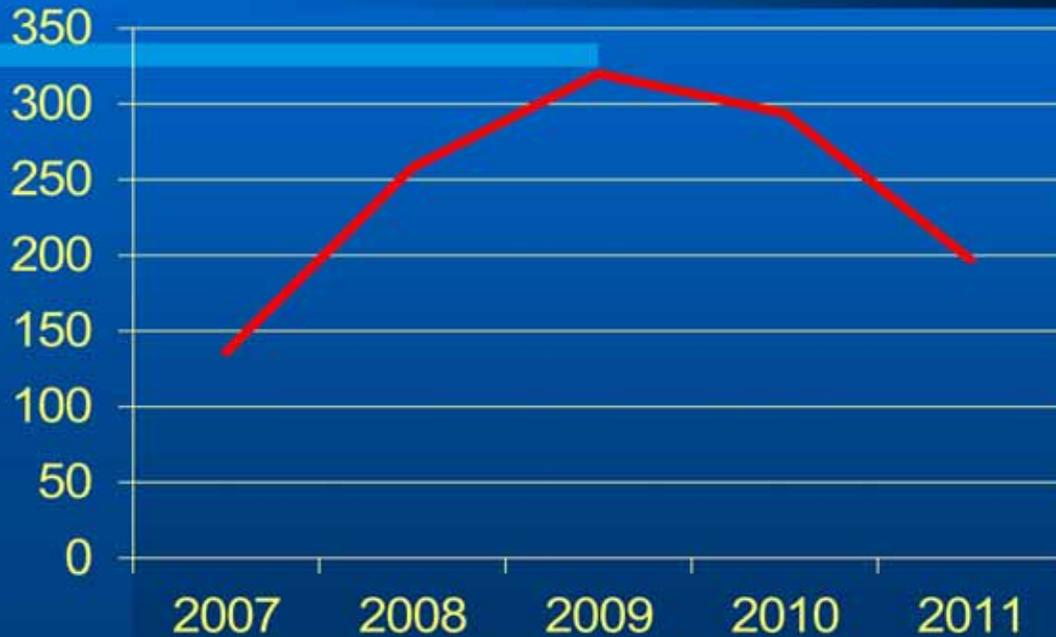
We expend significant effort on compliance and enforcement. We take a progressive enforcement approach designed to stimulate compliance. Much of our initial action was designed to educate producers as the General Order was phased in. The majority of our inspections are detailed compliance evaluations that include a review of documents maintained at the dairy along with observation of the production area, waste containment system, and land application areas. We also perform wet weather surveillance from both land and air (through a contract with a charter air service) looking for off-site discharges and other violations that pose a threat to water quality.

The dairy General Orders requires submittal of annual reports and other technical reports. If those reports are not submitted, our first action is to issue a notice of violation, which serves as a courtesy notice reminding the dairy owner of their obligation and potential penalties for noncompliance. If that does not stimulate compliance, we move through progressive enforcement that includes issuance of administrative civil liability complaints.

The compliance rate for report submittal is better than 93 percent.

Where we find that a facility has impacted groundwater quality, we are requesting dischargers make improvements to management practices that cease the discharge. Where the discharger is not willing to make appropriate improvements, we are moving through the progressive enforcement approach.

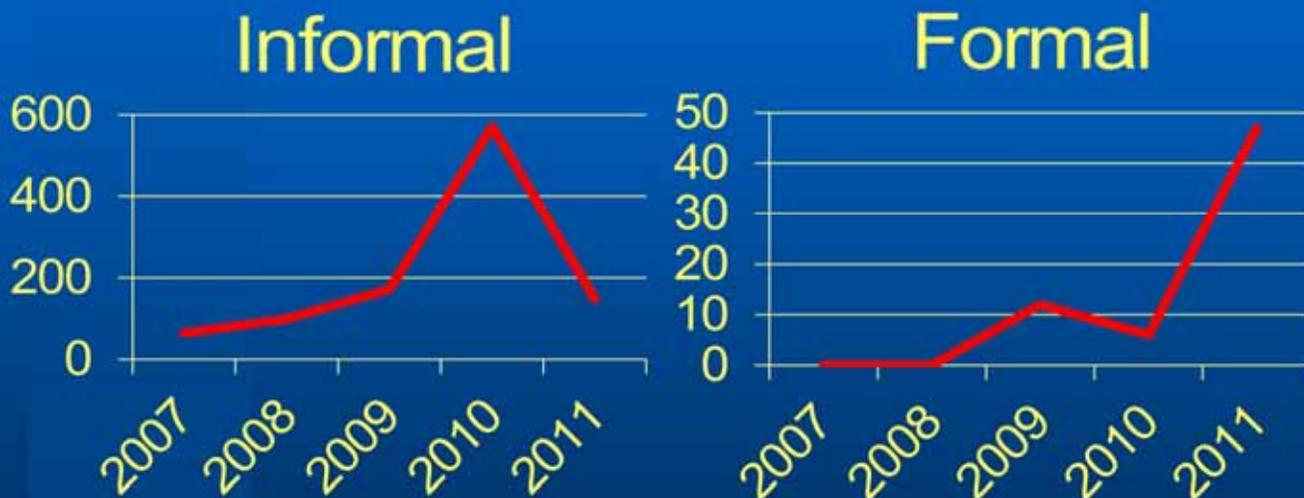
# Compliance Inspections



1 December 2011 Regional Board Meeting

This graph shows the number of compliance inspections conducted since 2007. The number of inspections of dairies increased from the levels in 2007, but have dropped off some recently with furloughs and the hiring freeze, and as staff have been more involved in the EIR, permitting, compliance and enforcement activities – as shown here (slide switch).

# Enforcement Actions



1 December 2011 Regional Board Meeting

The compliance rate with the General Waste Discharge Requirements has been very good. There are, however, dairies that have compliance problems.

These graphs show the number of enforcement actions against dairies since 2007.

On the left is the number of informal actions, which increased significantly since 2007.

Most dairies achieved compliance with only informal enforcement, but some dairies continued to have violations.

For those dairies with continuing compliance problems, the number of formal enforcement actions, including fines, has been increasing.

# Confined Animal Facilities Program Education and Outreach



## BAD

- Poor Grading, Poor Drainage
- Standing Water



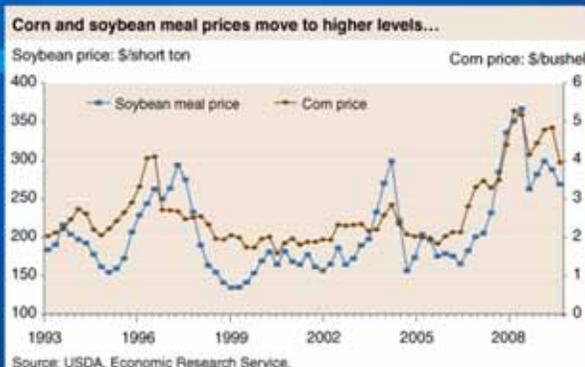
## GOOD

- Well Graded, Drains to Storage Basin
- Standing Water Will Not Collect

1 December 2011 Regional Board Meeting

Stakeholder involvement has helped the Board in the successful implementation of the Dairy General Order in large part due to the educational opportunities provided to dairymen and consultants by the California Dairy Quality Assurance Program and UC Cooperative Extension (with Central Valley Water Board staff participation). An Annual Report tool and Nutrient Management software were designed by Merced County (under contract with the Central Valley Water Board) to meet some of the Dairy General Order requirements and are available to all with access to the internet.

# Confined Animal Facilities Program Economic Factors



(per hundredweight)	CA statewide cost of production	CA overbase price	Margin
2001	12.24	13.11	0.87
2002	12.61	10.24	-2.37
2003	12.44	10.70	-1.74
2004	12.75	13.89	1.14
2005	13.43	13.17	-0.26
2006	14.18	10.87	-3.31
2007	15.77	17.27	1.50
2008	18.53	16.02	-2.51
2009	16.86	10.81	-6.05
2010	15.23	13.92	-1.31
YTD 2011	16.58	17.66	1.08

Source: CDFA



1 December 2011 Regional Board Meeting

The dairy industry in the Central Valley has been affected by economic factors that have caused milk prices to drop and feed prices to rise. Approximately 100 dairies in the Central Valley have closed in the past three years or are in the process of closing. Many convert to heifer ranches, raising replacement stock for dairies. Downturn in the economy coupled with the increased cost to comply with new regulations caused significant concerns and issues for the dairy producers and industry groups. In response, the Central Valley Water Board amended the Dairy General Order in April 2009 to allow an additional year for dairies to submit certain elements of the Waste Management Plan that require certification by a California registered professional engineer. The date for completion of any required repairs or upgrades for flood protection or pond capacity was not extended beyond the original July 2011 date.

# Confined Animal Facilities Program Representative Groundwater Monitoring

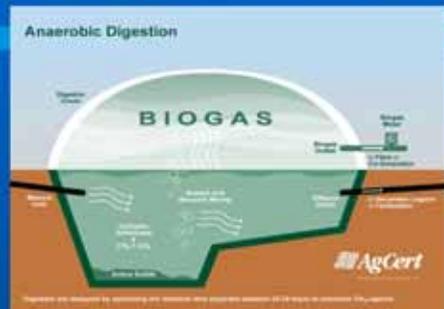


1 December 2011 Regional Board Meeting

Again, in an effort to improve permit compliance and find a more effective approach to obtaining valuable groundwater data while controlling costs, staff worked with stakeholders to develop an alternative groundwater monitoring program. In September, Phase I of the Central Valley Dairy Representative Monitoring Program was approved. The goal of representative monitoring is to demonstrate that current management practices at dairies are protective of water quality, and if they are not, to identify changes in management practices necessary to protect water quality. Representative groundwater monitoring provides an alternative to installing individual groundwater monitoring systems at each dairy facility. A portion of dairies are monitored and the results are applied to similar dairies that are not directly monitored.

Phase I of the Program is underway and includes installing 135 groundwater monitoring wells at eighteen representative dairy facilities in Merced and Stanislaus Counties. Under Phase II of the Program, a total of 50 to 100 representative dairies will be monitored, with the results being applied to more than 1,100 participating dairies. Phase II is scheduled to begin in 2012.

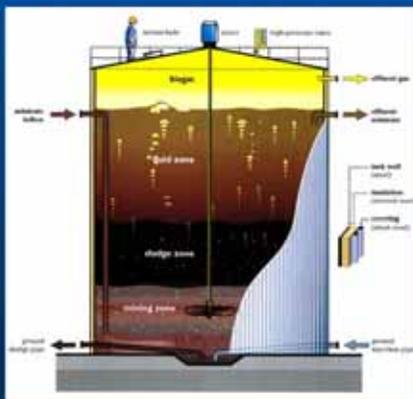
# Confined Animal Facilities Program Other Orders



- On-site Dairy Digester WDRs



- NPDES Permit



- Centralized Dairy Digester WDRs

1 December 2011 Regional Board Meeting

Three additional General Orders related to dairies have been adopted by the Central Valley Water Board since the original Dairy General Order was adopted in 2007. These are: a General Order for On-site Dairy Manure Digesters and a General NPDES Permit for concentrated animal feeding operations that discharge to surface water, both adopted in December 2010; and a General Order for Centralized Dairy Manure Digesters, adopted in June 2011. Both digester General Orders are supported by a Program EIR that was certified by the Central Valley Water Board in December 2010.

# Confined Animal Facilities Program Next Five Years



1 December 2011 Regional Board Meeting

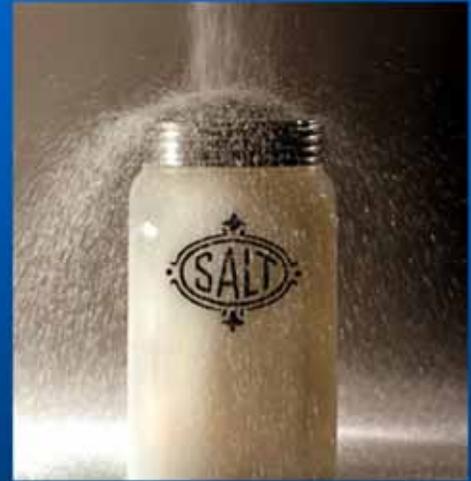
Staff is drafting general orders for other types of confined animal facilities. Staff in the Rancho Cordova office is developing a general order for poultry facilities and staff in the Fresno office is working on a general order for bovine feedlots (primarily heifer ranches and beef cattle feedlots). Both general orders will be circulated for public comment and are planned for consideration by the Board this fiscal year. Prior to being placed on the agenda, staff intends to conduct public workshops to receive stakeholder input on the general orders.

We will continue to write permits that protect the beneficial uses of receiving waters, particularly by degradation from nitrate and salts. We will continue our partnerships with other agencies and organizations to leverage our effectiveness. And, we will continue with progressive enforcement, consistent with the State Water Board's Enforcement Policy, to ensure compliance with waste discharge requirements, to preserve the integrity of the program, and to protect water quality.

# CV-SALTS

2006 – 2010

- Solidified Structure and Governance
- MOU with SWRCB, CVRWQCB and CVSC
- \$5-million CAA seed money



1 December 2011 Regional Board Meeting

One of the largest, most complex and difficult stakeholder efforts is the development of a region-wide Salt and Nitrate Management Plan commonly referred to as CV-SALTS. Goal of CV-Salts is to utilize stakeholders to develop a Central Valley Wide, Salt and Nitrate Management Plan that insures economic and environmental sustainability. This goal was formalized in March 2010, with an MOU between the Central Valley Water Board, State Water Resources Control Board and Central Valley Salinity Coalition. CV-Salts is intended to function as a Central Valley “clearing house” for all issues related to salt and nitrate.

Much of the effort between 2006 and 2010 was focused on developing a constructive stakeholder process, identifying funding and initiating some of the technical work needed for the effort.

## Solidified Structure and Governance

Executive Committee for stakeholder decision process

Technical Committee to review available data and identify data needs to support process

Education and Outreach Committee to insure public awareness including Disadvantaged and EJ communities

Established Central Valley Salinity Coalition to insure stakeholder concerns addressed and PROVIDE FUNDING TO MOVE FORWARD WITH A COMPREHENSIVE PLAN

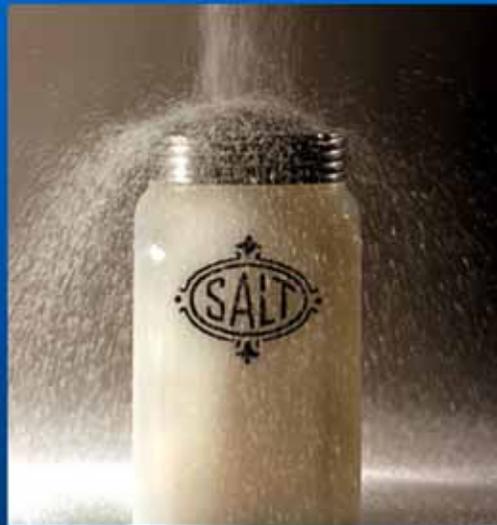
Membership in the Coalition has slowly been expanding with a significant increase in agricultural representatives between 2009 and 2010.

The State Water Board supported its commitment with the allocation of \$5-million in CAA funds to provide seed money for the technical information needed for a scientifically sound plan as well as for the required environmental and economic reviews. Approximately \$2-million of that funding has been committed to date, with additional work being prioritized and match funding identified.

# CV-SALTS

2006 – 2010

- Strategy and Workplan
- Initial projects completed
  - Documented economic impacts
  - Source/fate pilot studies in all three basins
  - GIS based system



1 December 2011 Regional Board Meeting

In 2009, a strategy and workplan was developed by the stakeholders for this effort. Resource needs were estimated between \$20 and \$50-million for a fully comprehensive program. It is clear that for a successful effort, the stakeholders will need to step up to the plate and provide significant additions to the seed money identified.

With a portion of the seed money and approximately an equal amount of match, some initial projects have been completed, including:

A study by UCD documenting the economic cost of remaining status quo in the Central Valley, showed that by 2030

Direct Annual Costs ranged from \$1 – 1.5 Billion

Annual statewide income impacts ranged from \$1.7 – 3 Billion

A pilot salt/nitrate source and fate study was completed in the Yolo, Modesto, and Tule Lake areas

A GIS based system was developed that identifies all surface water bodies in the valley and their current beneficial uses and associated water quality objectives.

An award winning PBS documentary on salts in Valley entitled Salt of the Earth

# CV-SALTS

## Currently

- Statewide Recycled Water Policy
- Lower San Joaquin River Salinity Objectives
- Guidelines for Salt/Nitrate Source Studies
- Outline for BMP Toolbox

EO Report

Central Valley Water Board  
1 December 2011 Regional Board Meeting

With the development of a more defined structure, CVSalts is now taking on more of the key salt and nitrate issues in the Central Valley.

The 2009 Statewide Recycled Water Policy requires salt and nutrient management plans from each groundwater basin in California by 2014. CV-SALTS will be providing the plan to satisfy this requirement in the Central Valley.

CV-SALTS has also taken on the task of developing salinity water quality objectives in the lower San Joaquin River upstream of Vernalis (upstream of the Delta). A committee has been formed to develop the objectives and is currently finalizing its workplan for the effort and developing scopes of work to update models used to identify salt sources within the basin and appropriate water quality objectives to protect existing beneficial uses.

Additional subcommittees have been reviewing pilot studies and existing industry management practices to identify guidelines for future source/fate studies and to develop a toolbox of management practices to reduce salt and nitrate, respectively.

# CV-SALTS

## Currently

- Policy Discussions to Frame Management Plan and Basin Plan Amendment
  - Archetypes
- Technical RFPs/RFQs awards early 2012

1 December 2011 Regional Board Meeting

A major focus of CV-SALTS during this year has been to identify consensus stakeholder issues in order to frame the Salt and Nitrate Management Plan and future Basin Plan Amendment. To provide focus, stakeholders have identified archetypes for areas that address priorities identified including:

Appropriate application of municipal/domestic supply and agricultural supply beneficial uses in both surface and ground water

Close collaboration with our work on MUN in POTW ag drain receiving waters

Review of appropriate water quality objectives

Evaluation of implementation alternatives in areas already impaired

Currently, Proposals are being reviewed and awards are expected in 2012, for a number of technical projects to support the efforts in early 2012, including:

Review of salt and nitrate criteria (Animal Drinking Water and Aquatic Life)

Refining the beneficial use and objective GIS system

Developing a conceptual salt/nitrate model for the Central Valley

Identifying implementation alternatives

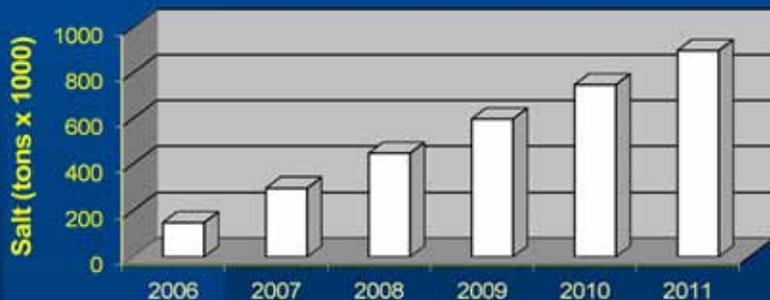
Work on conducting economic reviews and providing the CEQA documentation for the proposed Management Plan is scheduled to be initiated during 2013.

# CV-SALTS

## Next 5-years

- Regional Board Workshop Spring 2012
- Recycled Water Policy - May 2014
- Basin Plan Amendment 2015

Salt Accumulation SJR Basin (DWR, 1998)



1 December 2011 Regional Board Meeting

The CV-SALTS process started with a joint State and Regional Board workshop in 2006, so it is appropriate to have a follow-up workshop by spring 2012. The workshop will focus on the revised strategy/workplan/policy and framework as well as provide more detail on the technical work that is completed, ongoing and planned.

As we continue the effort, we need to keep in mind that the deadline for salt and nutrient management plans is May of 2014. The Water Board will have one year after submittal to consider that plan for inclusion in our Basin Plan as an amendment.

The timeline is tight, and the clock is ticking. As an example, based on Department of Water Resources estimates, almost a million tons of salt have accumulated in the Lower San Joaquin River Basin just since the beginning of this effort in 2006. This example does not consider the additional salt from the Sacramento River Basin entering the Delta, the recycling of salt in the Tulare Lake Basin, or the continuing impacts to our drinking water sources from increased nitrate. The issues are complicated, the stakeholder process at times cumbersome, but we just don't have the luxury of ignoring the salinity and nitrate problem in our Region indefinitely.

We are all looking forward to the status update at the spring workshop.

(Figure Reference: Drainage Management in the San Joaquin Valley: A Status Report (02/01/1998). A status report prepared under the direction of Manucher Alemi, San Joaquin Valley Drainage Improvement Program (SJVDIP) Coordinator by DWR staff George Nishimura and Wayne Verill.)

# Enforcement

Enforcement

# Enforcement

- **100% Major NPDES Permittees in the Electronic Self Monitoring Reporting**
- **Eliminated MMP Backlog**
- **Maintained Timely Processing of MMPS**
- **Enforcement Actions Focused on Priority Areas**

1 December 2011 Regional Board Meeting

Slide 85

In Enforcement, the Regional Board continued to be very active and had another banner year. A few of the highlights include:

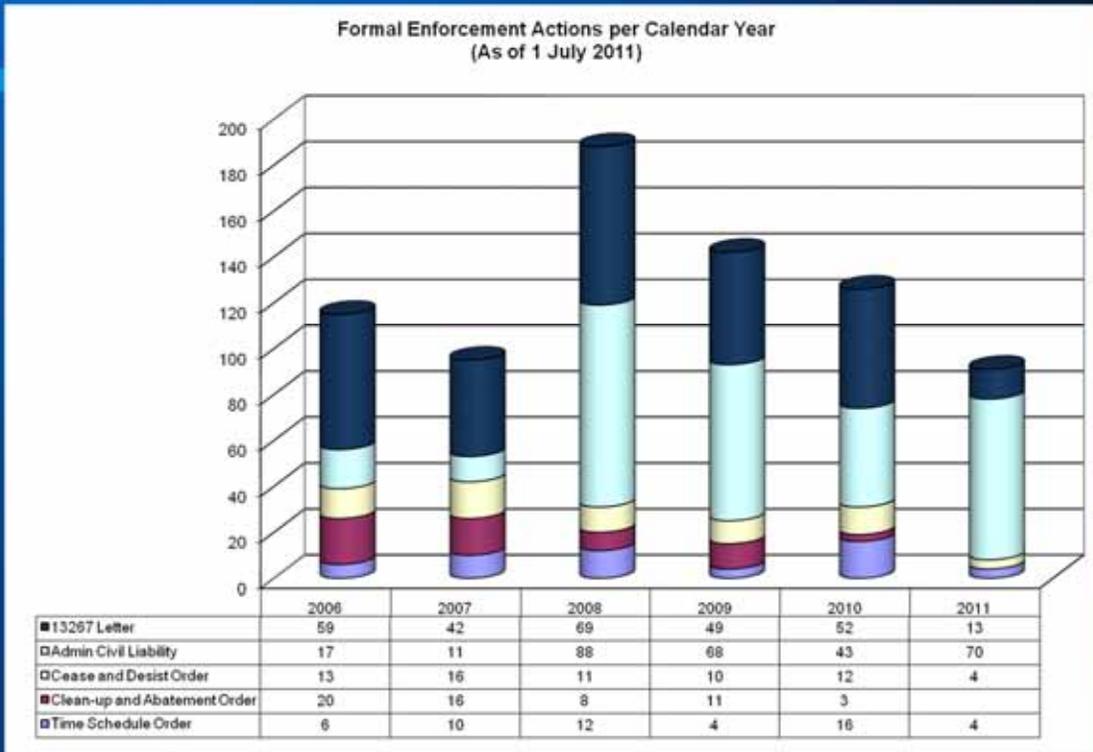
The reorganization to establish dedicated compliance and enforcement groups for core regulatory programs in Sacramento and Fresno offices demonstrated the benefits of increased focus and efficiencies.

In order to increase even more those efficiencies, our Regional Board, together with the other regions, started the transition of Major NPDES Permittees from paper reporting to electronic only reporting. All Major NPDES Permittees and a significant number of individual Minor Permittees have been trained and enrolled in the electronic reporting system and the vast majority of them are already “eSMR only”.

After finalizing the MMP Initiative, Regional Board staff remained focused in retaining the momentum and addressing the MMP violations with appropriate enforcement actions within the time schedules outlined in the new Enforcement Policy. As a consequence, the Regional Board has no backlog of unaddressed MMPs.

In addition, the Regional Board staff continued to use the progressive enforcement through the use of a mix of informal and formal actions and prioritization focusing on priority water quality areas

# Enforcement

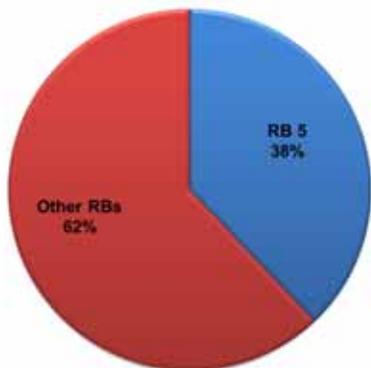


1 December 2011 Regional Board Meeting

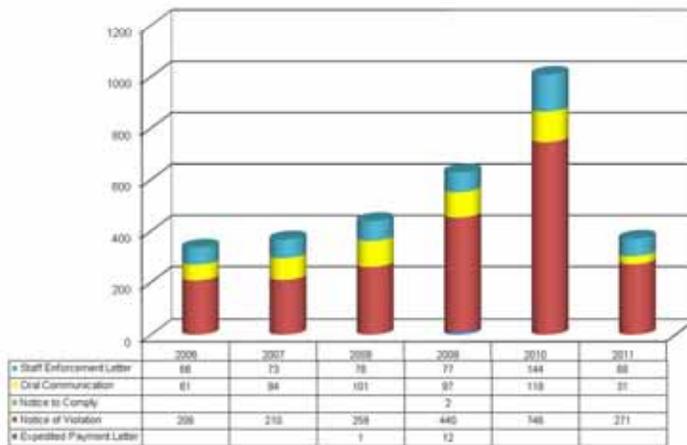
This graph depicts a tally of the formal enforcement actions for core regulatory programs based on the data recorded in CIWQS for the last five years. It represents another good measurement of the overall sustained effort in this area of compliance and enforcement. Periodic update of these activities are included in the Executive Officer’s Reports and additional compliance and enforcement data for other regulatory programs are also included on a routine basis.

# Enforcement

Enforcement Actions  
2006-2011



Informal Enforcement Actions per Calendar Year  
(As of 1 July 2011)



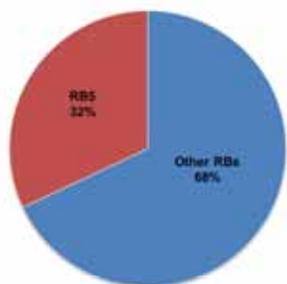
1 December 2011 Regional Board Meeting

The graph on the lower right shows a tally of informal enforcement actions performed for core regulatory programs in the last five years. Again, this does not capture compliance and enforcement data from programs not yet fully integrated in CIWQS, such as Irrigated Lands Program.

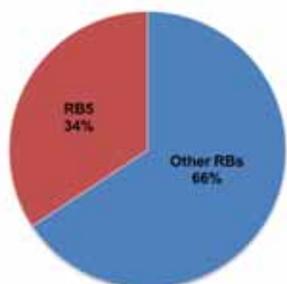
The graph on the left represents Regional Board's contribution to the statewide compliance assurance and enforcement effort in core regulatory programs since 2006. Our Regional Board contributed around 38% of the statewide total count of enforcement actions recorded in CIWQS.

# Enforcement

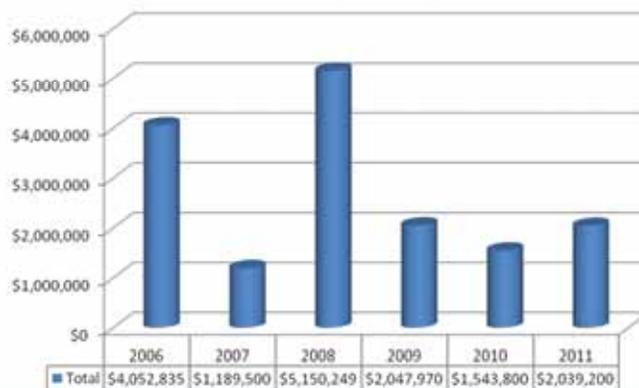
Sum of TOTAL \$ PAID/COMPLETED AMOUNT  
2006-2011



Sum of TOTAL ASSESSMENT AMOUNT  
2006-2011



ACLs per Calendar Year  
Sum of Total \$ Paid/Completed Projects Amount  
(as of 1 July 2011)



1 December 2011 Regional Board Meeting

This graph shows the outcome of administrative civil liability actions in the last five years. It demonstrates that the formal enforcement effort resulted in significant completion of compliance projects and penalty collection. A total of approximately 16 million dollars have been paid in penalties or spent on completed environmental projects between 2006 and 2011. Also, about 8 million dollars worth of compliance or supplemental environmental projects are in the process of being completed due to these formal enforcement actions. It is significant to note that this Regional Board issued about a third of the statewide total assessed penalties and also contributed to about a third of collected or completed projects amounts during the period surveyed.

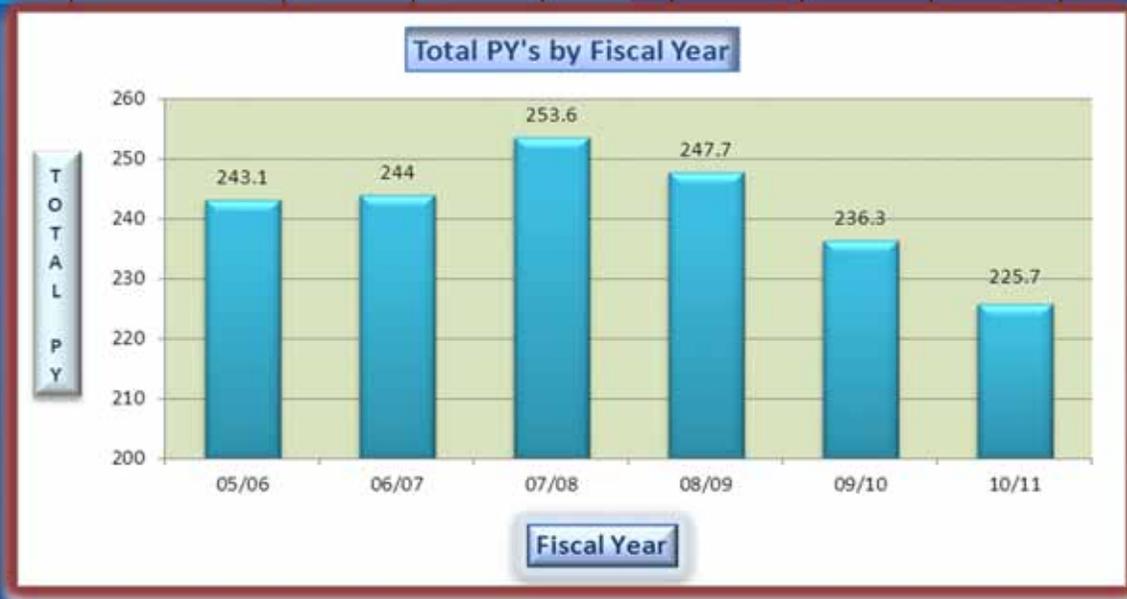
What is even more significant is the impact of these enforcement actions in improving water quality, leading to significant upgrades in treatment processes, removal or prevention of release of significant amounts of pollutants; they resulted in the implementation of a number of successful restoration or improvements of the aquatic ecosystems in the region or educational efforts to increase the understanding and change the behavior of how the water quality challenges are addressed throughout the Central Valley.

The increase for the calendar year 2008 reflects the implementation of the MMP Initiative to address the backlog of violations not assessed MMPs.

# Budget

## Total PY's by Fiscal Year

Fiscal Year	05/06	06/07	07/08	08/09	09/10	10/11
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1 December 2011 Regional Board Meeting

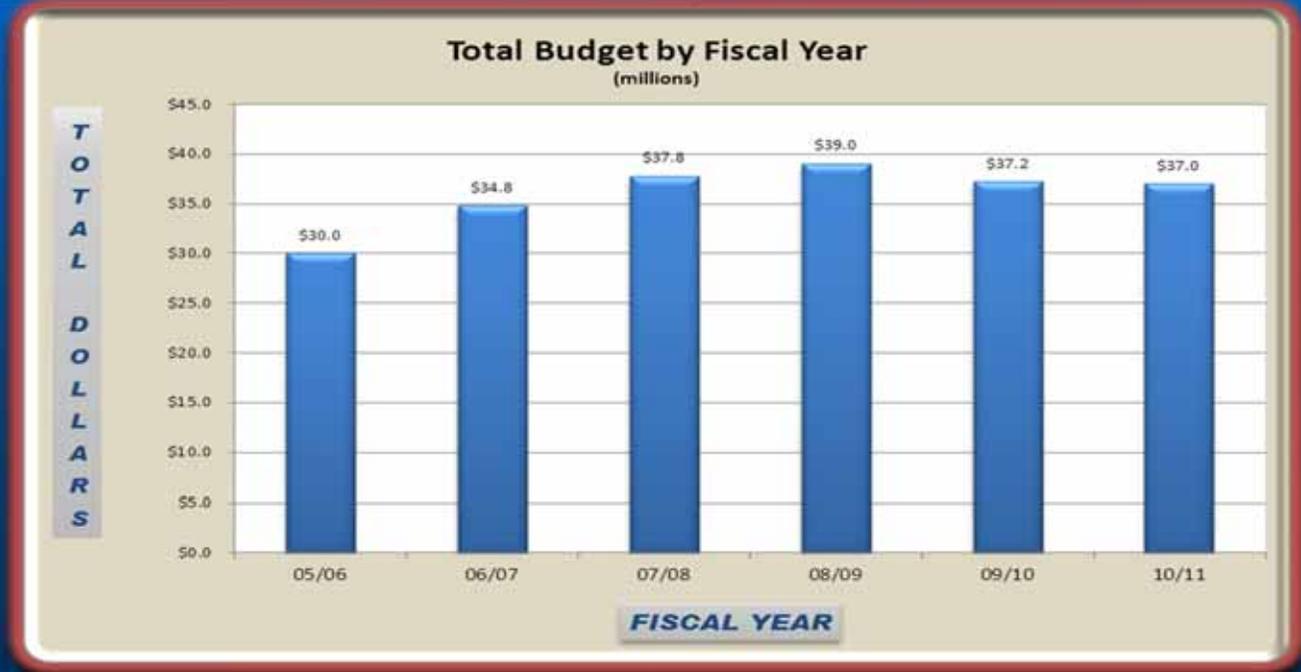
Peak year was in FY 07/08.

Since that time we are down 27.9 positions. This represents a 11% reduction.

Given the current financial status of the state we do not expect any increase in staff during the next few years.

## Total Budget by Fiscal Year

Fiscal Year	05/06	06/07	07/08	08/09	09/10	10/11
Total Dollars	\$ 35,033,687	\$ 34,830,772	\$ 37,876,052	\$ 39,022,780	\$ 37,195,155	\$ 37,012,989



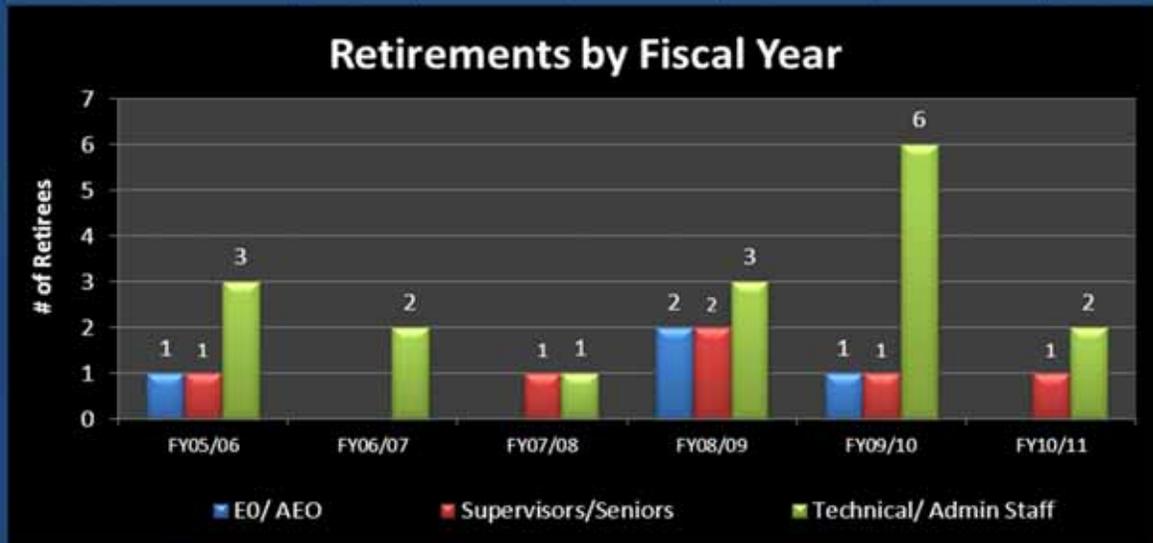
1 December 2011 Regional Board Meeting

Budgeted \$'s change from year to year primarily due to staffing and contract changes.

Most of the contract changes are associated with Cleanup and Abatement projects.

# Retirements by Fiscal Year

	FY05/06	FY06/07	FY07/08	FY08/09	FY09/10	FY10/11
EO/AEO	1	0	1	4	1	0
Supervisors/Seniors	2	2	1	4	4	4
Technical / Admin Staff	2	0	1	0	3	0



1 December 2011 Regional Board Meeting

We have seen a significant number of retirements since FY 05/06.

Most of the people retiring have over 30 years of state service.

This represents a loss of a significant amount of institutional knowledge.

Three of the five AEO's have retired.

Six supervisors and seniors have retired.

17 technical or administrative staff have retired.

We expect this trend will continue over the next few years but at a declining rate.

# Electronic File Tracking System

- **Locate & manage files**
- **45,000 barcoded records**
- **340,000 closed records**
- **Enhanced search capabilities**
- **Generates required forms**

1 December 2011 Regional Board Meeting

During the last few years we have implemented an Electronic File Tracking System.

System is designed to track both our current files and closed files that are stored offsite at the State Records Center.

System is tracking 45,000 active records and 340,000 inactive records.

Active records are tracked using a barcode which is affixed to the file.

System provides enhanced search capabilities and allows for easier retrieval and tracking of files.

System also generates of the required forms for storing and retrieving files from the State Records Center.

# Video Conferencing



- **Implemented video conferencing**
- **Next phase: remote board meeting**
- **Identify funding to implement**

1 December 2011 Regional Board Meeting

We have successfully implemented video conferencing between our three offices.

This has helped to reduce the amount of staff travel time between our offices and allowed staff to more easily participate in discussions that they might have otherwise missed due to the travel time.

The next phase is to increase the functionality of the system to allow for “Remote Board Meeting Participation”.

Additional equipment will be installed in each office that will allow the Board Meeting to be Broadcast to each office and will allow the public, board members and staff to participate in the board meeting for any of our three offices.

This will make it easier for the public to participate rather than having to travel to Sacramento.

We are currently identifying all of the equipment needs and will be submitting a request to State Board to set a side funding. If things go well we should be able to get this completed this fiscal year.

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# Pamela's Picks - Reflections

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# Critical Successes

## 2006 - Present

- **Groundwater Quality Protection Strategy and Workplan**
- **Dairy General Order**
- **Programmatic EIR Dairy Digesters**
- **General Orders for Digesters**

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# Critical Successes 2006 - Present

- **Irrigated Lands Waiver Update**
- **Programmatic EIR Long-Term Irrigated Lands Waiver**
- **Irrigated Lands Monitoring, Management Plans and Enforcement**

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# Critical Successes 2006 - Present

- **Delta Strategy**
- **Methyl Mercury TMDL**
- **Sacramento Regional Permit Renewal**
- **Progress on Delta Regional Monitoring Plan**

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# Critical Successes 2006 - Present

- **Elimination of MMP Backlog**
- **Elimination of NPDES Backlog**
- **100% Participation eSMR NPDES Majors**
- **Increased Participation in eSMR NPDES Minors**

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# Critical Successes

## 2006 - Present

- **Significant Progress in CV-SALTS**
- **Water Quality Improvement through Innovative Approaches**

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# Critical Successes 2006 - Present

- **Elevating Central Valley Water Board**
  - **Timber Harvest**
  - **Delta**
  - **Bioenergy**
  - **Aquifer Storage and Recovery**
  - **Statewide efforts**
  - **Brochure**

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# Critical Successes 2006 - Present

- **Reorganization and Consolidation**
- **New Managers**
- **Executive Management Group**
- **Leadership Group**
- **Project Management Education**

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# Pamela's Picks - Projections

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# Projection -Next Five Years

- **Adopt Salt and Nitrate Management Plan**
- **Adopt Drinking Water Policy**
- **Fully Implement Long-Term Irrigated Lands Regulatory Program**

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# Projection -Next Five Years

- **Adopt Mercury TMDL for Upstream of Delta**
- **Eliminate WDR Backlog**
- **Adopt General Order for New and Expanding Dairies**
- **Adopt ASR General Order**

# Projection -Next Five Years

- **General Permit for Phase I MS4s**
- **Implement Delta Regional Monitoring Program**
- **Clean Drinking Water for Disadvantage Communities**

# Projection -Next Five Years

- **Implement Remote Meeting Access**
- **Implement Leadership Education Program**
- **Continued Organizational and Operational Efficiency Improvements**

# Pamela's Gratitude

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# Credits and Thanks

- **Technical Staff**
- **Administrative Staff**
- **Seniors**
- **Supervisors**
- **Assistant Executive Officers**

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# Questions?

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