

**State Water Resources Control Board
June 16, 2009 Board Meeting
Item 14 - Executive Director's Report**

OFFICE OF ENFORCEMENT

Mandatory Minimum Penalty Backlog Enforcement Initiative: The Office of Enforcement has posted its report on this Initiative on the Water Board webpage. A comprehensive update on the Initiative was presented at the April 21, 2009 State Water Board meeting.

Summary information about the Initiative will be transmitted to the Legislature by the Executive Director.

The report indicates that as of March 31, 2009, out of the 455 enforcement actions initiated, 228 matters have been fully resolved or settled which means that the Initiative has resulted in actual liabilities of \$15,595,500, which consist of:

- (1) \$ 7,689,504 as liabilities paid (or to be paid) to the Cleanup and Abatement Account;
- (2) \$ 7,075,750 as payments towards completion of a compliance projects for facilities serving small communities with financial hardship;
- (3) \$ 830,246 as suspended liabilities for supplemental environmental projects.

If the remaining MMP violations currently in process are resolved in the Water Boards' favor, it would generate an additional \$ 26,414,000 in liabilities.

Water Quality Enforcement Policy Revisions: A State Water Board workshop occurred on June 4, 2009 to consider the draft Policy. The draft includes revisions based on a staff workshop held on January 19, 2009.

Staff has targeted Fall 2009 for a State Water Board hearing to adopt the revised Policy.

DIVISION OF WATER QUALITY

ASBS General Exception: Staff is preparing the initial study and draft mitigated negative declaration that will support a general exception to the ocean plan for discharges of storm water and nonpoint source discharges to ASBS. Staff is working toward release of the documents in June 2009 and plans a public hearing in August 2009.

Blue Green Algae: An in-depth Academy Training Course on Blue Green algae blooms was presented to Regional Board staff and key stakeholders (Tribes, other State agencies, local county health agency staff, and others) in early June 2009. In addition staff held another Statewide Blue Green Algae Committee meeting on June 9, 2009 to discuss preparation for the upcoming algal bloom summer season.

Composting Facilities: Regulatory Concepts to Address Water Quality Issues:

The Division of Water Quality continues to work in collaboration with the Integrated Waste Management Board (CIWMB) to develop a statewide approach to address water quality issues pertaining to composting facilities. A joint workshop to solicit stakeholder input regarding composting operations is confirmed for August 17, 2009. The overall goal of this effort is to develop a regulatory approach that is protective of water quality and that supports the CIWMB objective of diverting decomposable materials from landfills.

Groundwater Ambient Monitoring and Assessment (GAMA) Program: GAMA's Priority Basin Project continues to be on hold since December 2008, due to the Governor's Executive Order to stop work on bond-funded contracts. There are significant delays in final products.

However, the U.S. Geological Survey's National Water Quality Assessment (NAWQA) program is funding a study that continues the work of the GAMA Priority Basin Project which has been halted due to a lack of funding. NAWQA is providing about \$500,000 to fund the testing and scientific analysis. Starting in June and continuing through the summer, USGS will sample about 60 wells in the Coast Range north of San Francisco Bay, including areas around Clear Lake, Ukiah, Willits and Covelo, and in coastal areas from Point Arena to Crescent City. The testing will be done in portions of nine counties – Napa, Sonoma, Colusa, Glenn, Mendocino, Humboldt, Del Norte, Trinity, and Lake.

Online groundwater data using Google maps is available on the beta version of GeoTracker GAMA. GeoTracker GAMA maps groundwater data from tens of thousands of wells used for public and private water supply (water quality), as well as compliance wells for cleanup sites (groundwater quality and groundwater levels).

Landscape Irrigation General Permit: A public hearing on the draft General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water (General Permit) was held on May 19, 2009. The General Permit and associated environmental documents are scheduled for consideration of adoption at the July 7, 2009 State Water Board meeting. AB 1481 (DeLaTorre, Ch. 535, Stats. 2007) established a deadline for adoption of July 31, 2009.

Ocean Plan Amendment: Staff has prepared non-substantive amendments to the Ocean Plan. Staff released these for public comment on April 15, 2009. The public hearing and Board consideration are scheduled for June 16, 2009.

Once Through Cooling – CWA Section 316(b): Staff has been working on a draft policy and environmental documents and expects to release both for public review and comment on July 1, 2009. Staff tentatively plan to hold a hearing on the policy and environmental document in August of 2009.

Onsite Wastewater Regulations (Septic Tank Systems): Staff has been meeting with different stakeholder groups and is preparing the outline of a new proposal based on these meetings and the many comments received. Staff expects to have the outline ready for review by the end of Summer 2009.

Recycled Water Policy: The Office of Administrative Law (OAL) approved the State Water Board's Recycled Water Policy on May 14, 2009. Staff is preparing implementation information for the Regional Water Boards.

Statewide Trash Total Maximum Daily Load (TMDL): The State Water Board will be working with a U.S. EPA contractor to begin development of a statewide policy for trash. This policy will utilize the different Trash TMDLs adopted by the Regions and develop them into a policy applicable statewide, obviating the need for those Regions without trash TMDLs to adopt them. Funds have been obligated and we are now waiting for U.S. EPA to issue the task order so work can begin.

Storm Water Advisory Task Force (SWATF) Meeting: SWATF held its seventh meeting on May 18, 2009. The SWATF continues to work on the Effectiveness Assessment Document for evaluating and measuring the effectiveness of municipal storm water management programs. As stated by State Water Board staff in an information item to the State Water Board at its June 2, 2009 meeting, this task is difficult, and the SWATF will not be able to provide the document until later this summer.

Storm Water Construction General Permit (CGP): The State Water Board held a public hearing on the tentative CGP on June 3, 2009. The public comment period is open on the draft permit until June 17, 2009. State Water Board consideration of the permit is targeted for a September 2009 board meeting.

Wetland and Riparian Area Protection Policy (WRAPP): State and Regional Water Board staff continues to meet on a semi-monthly basis to develop a policy document that includes the Phase 1 elements of a wetland definition, a wetland regulatory program based on the 404(b)(1) Guidelines, and a wetland assessment and monitoring plan for Water Board programs. The Technical Advisory Team, which advises the Development Team (DT) on implementing sound science in the policy, plans to provide its wetland definition to the DT on May 29, 2009.

Through the Aquatic Science Center (a Joint Powers Authority administered by the San Francisco Estuary Institute), we have applied for U.S. EPA grant funding to supplement existing grant funding for Phase 1 science support. In addition, the DT has requested Economic Stimulus funding to support both Region 1 and 2's policy and the state policy efforts.

Statewide Policies/Significant General Permits:

Appendix 1 provides the current status of pending Statewide Policies and Significant General Permits.

Irrigated Lands Regulatory Program Update Report:

The June 2009 report is attached as Appendix 2.

DIVISION OF WATER RIGHTS

Term 91 Notice of Probable Curtailment of Water Diversion in the Sacramento-San Joaquin Delta Watershed:

On April 3, 2009, the Division of Water Rights mailed a "Notice of Probable Curtailment of Water Diversion" (Term 91 Notice) to 115 permit and license holders in the Sacramento-San Joaquin Delta watershed. The curtailment of diversions is ordered when (1) the Delta is declared to be "in balance" and (2) stored water from the Central Valley Project and the State Water Project is being released to meet water quality standards and other inbasin entitlements. The Term 91 Notice advised the permittees and licensees that they would likely be curtailed from diverting water under their water rights from May 1 through November 15, 2009. Late spring rains did improve water conditions; however, by May 31, the

conditions to trigger Term 91 curtailments have been met. Consequently, the Division will mail Term 91 Notices to affected permit and license holders on June 15, 2009. If these water right holders continue to use water during the curtailment period, they must use an alternate supply such as groundwater or contract (purchased) water.

Approval of Major Vineyard Expansion Project of Guenoc Winery: On March 20, 2009, the Division approved a roughly 5,000-acre vineyard expansion project proposed by Langtry Farms and Guenoc Winery in Napa and Lake Counties. The Division issued four orders, approved modifications to seven licenses and issued seven amended licenses. The Division approved changes to one permit; denied time extension but approved changes on another permit; and denied extensions of time and a change on one permit. On April 22, 2009 a petition for reconsideration was filed on the order denying extension and change on one permit.

Nevada Irrigation District files 26 Petitions for Change for its Water Right Permits in Nevada County: On March 27 and April 2, 2009, Nevada Irrigation District filed 26 petitions for change to reconcile its ongoing water diversion and use practices with its water right permits. Division staff is reviewing the petitions and will continue processing. It is anticipated that the Division will post a public notice of all the petitions in one notice by July 1, 2009.

Klamath Hydroelectric Project Update: The November 2008 Agreement-in-Principal (AIP) established an approach to the possible voluntary removal of the hydroelectric dams on the Klamath River. Signatories to the AIP provided an update to the State Water Board at its February 17, 2009 meeting. At that time, the AIP parties offered to update the Board a second time prior to the June 30 target date for reaching a final agreement pursuant to the AIP. In lieu of appearing before the Board on June 16, the AIP parties expect to provide a written update on progress toward a final agreement. This report will be placed on the State Water Board's website.

Additionally, a proposed resolution to fund CEQA review for water quality certification of the Klamath Hydroelectric Project (KHP) using Cleanup and Abatement Account funds was placed on the agenda for the March 17, 2009 Board meeting. This item was subsequently removed from the agenda. Instead, staff was directed to work with PacifiCorp to use up to \$200,000 offered by the company for the next steps in CEQA review. (Either of these steps would avoid triggering a clause in the AIP that permits PacifiCorp to withdraw if costs are imposed on the company as part of the water quality certification process.) Water Board staff, PacifiCorp and the third-party consultant, ENTRIX, have amended the memorandum of understanding that governs each entity's role in the CEQA process. Under the agreed-on workplan currently being implemented by ENTRIX, the contractor will (1) draft the sections of a Draft Environmental Impact Report that cover current conditions for the different resource areas; (2) develop a database of information under review in the CEQA process; and (3) identify the limits of available information, with recommendations for additional information development. This work will continue until the earlier of: (a) execution of a Final Klamath Hydroelectric Settlement Agreement, or (b) exhaustion of the \$200,000.

Russian River Water Right Issues

Workshop to Receive Comments on Sonoma County Water Agency's Petition for Temporary Urgency Change: On April 6, 2009, the State Water Board's Division of Water Rights issued Water Rights Order WR 2009-0027-DWR, approving Sonoma County Water Agency's (SCWA) petition for temporary urgency change of its water right permits. The

Order approved a reduction of SCWA's instream flow requirements for the Russian River from April 6 through October 2, 2009, due to dry year water conditions. On May 6, 2009, the State Water Board held a workshop to receive comments on SCWA's petition and the Division's Order. On May 28, 2009, Board Member Art Baggett signed Order WR 2009-0034-EXEC, which amends the April 6 order and conditionally approves SCWA's petitions for temporary urgency changes.

Frost Protection: The Deputy Director for Water Rights continues to meet regularly with stakeholders following a State Water Board workshop on April 7, 2009 on fishery issues related to agricultural frost protection practices in the Russian River watershed. The Frost Protection Task Force initiated by the National Marine Fisheries Service Office of Enforcement has set up three subcommittees to explore: (1) best management practices (BMPs) related to frost protection of vineyards, (2) expedited permitting for projects intended to alleviate the impacts of frost protection, and (3) streamflow monitoring. At the Task Force Meeting held May 21, 2009, each subcommittee reported on its efforts over the past month. The BMP subcommittee reported on proposed BMPs related to frost protection that were initially developed by water users in Sonoma County. The expedited permitting subcommittee reported that it is investigating the possibility of using a "general" water right permit for certain frost protection projects that could be designed to have no significant environmental impacts. The streamflow monitoring subcommittee reported on efforts to enhance ongoing streamflow monitoring in the Russian River, including monitoring in the Alexander Valley to determine impacts of groundwater diversions in the Valley on streamflow. The Division of Water Rights has purchased eight new river stage recorders that will be used in conjunction with these streamflow monitoring efforts. The data from these recorders is available via the internet on a real-time basis. The Deputy Director for Water Rights reported that the Division will be developing proposed frost protection regulations for consideration by the Board later this year.

Instream Flow Policy (AB2121): Following recent contract approvals, the State Water Board's consultants have recommenced work associated with completing the draft instream flow policy. That work includes responding to technical comments on the draft policy and draft substitute environmental document (SED) released by the Division of Water Rights in December 2007, completing a flow/habitat sensitivity analysis, and making revisions to the draft policy and draft SED. Last month, the State Water Board received a stakeholder developed alternative, which has been posted on the Division of Water Rights' website at http://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/index.shtml. Division staff and the consultants are reviewing the proposal. In response to the proposal, the sensitivity analysis, and comments received on the prior draft policy, staff will propose changes in the draft for consideration by the State Water Board later this year.

Strategic Workplan for the Bay-Delta: As part of the Strategic Workplan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta), the State Water Board will comprehensively review and update, if needed, the 2006 Bay-Delta Plan, as well as water rights and other measures implementing that plan.

Update to the Bay-Delta Strategic Workplan: Staff anticipates providing an update on the Bay-Delta Strategic Workplan during the July 7, 2009 regularly scheduled Board meeting. The first quarter 2009 update of the Strategic Workplan can be viewed at: http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/schedule_elementactions_1stqtr2009.pdf

Update to the Southern Delta salinity and San Joaquin River flow objectives:

On April 22, 2009, the State Water Board held the first in a series of water quality control planning workshops to receive information related to southern Delta salinity and San Joaquin River flow objectives. During the facilitated workshop, interested persons were given the opportunity to discuss and comment on proposed modeling alternatives for southern Delta salinity and San Joaquin River flow objectives and how the Board should address the technical issues associated with these objectives. A follow-up public staff workshop has been scheduled for June 19, 2009, to provide an update regarding development of modeling alternatives. An update will also be provided on related modeling activities, including meetings that State Water Board staff has held with modelers to identify issues that need to be resolved to conduct modeling. For more information see:

http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning. Water Rights staff anticipates finalizing initial modeling alternatives by July, beginning modeling later in the summer, and holding additional meetings for public participation as necessary. Staff also anticipates release in mid-July of a draft report on crop salt tolerance by Dr. Glenn Hoffman, retired USDA salinity laboratory researcher, with a follow-up workshop in mid-August.

Periodic Review of the 2006 Bay-Delta Plan: On October 8, 2008, the State Water Board held a workshop to receive comments from agencies and members of the public regarding the periodic review of the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (2006 Bay-Delta Plan). The State Water Board has considered comments, and Water Rights staff has prepared a report identifying those issues that should be further reviewed in the Basin Planning process. The Draft Periodic Review Staff Report was released May 15, 2009 along with a notice of a July 7, 2009 adoption hearing. The public comment period ends 12:00 p.m. June 15, 2009. The Notice and Draft Staff Report can be found at:

http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/periodic_review/

Drought Activities Update: In order to facilitate the availability of water to drought-stricken areas in California, the Division of Water Rights has streamlined procedures to expedite processing of temporary water transfers and temporary urgency change petitions to amend water right conditions. Recent notable activities include:

- On May 28, 2009, State Water Board received a comment letter from Neumiller and Beardslee on behalf of the County of San Joaquin and the San Joaquin Flood Control and Water Conservation District (County) regarding the petitions for temporary change to the Department of Water Resources' (DWR) 2009 Drought Water Bank (DWB). The County does not object to the transfers but requests that the following condition be added to any order approving the transfers: *"If the water quality objectives within the Southern Delta are violated, the transfers and/or exchanges under this order shall cease until such time as the water quality objectives are met."* It states that if the permit conditions for the State Water Project (SWP) and Central Valley Project (CVP) are not met, including the southern Delta salinity objectives, there would be injury to existing legal users of water within the Delta.
- On May 19, 2009, State Water Board issued Order WR 2009-0033, conditionally approving the petition for change to consolidate the place of use of the SWP and CVP. The petition for change will consolidate the SWP and CVP places of use by adding the CVP place of use to SWP water rights and the SWP place of use to CVP water rights. Approval of the petition will facilitate transfers and exchanges between SWP and CVP contractors to make full use of SWP and CVP facilities in order to minimize the impacts of current dry conditions. On

May 21, 2009, State Water Board approved the 2009 Reporting Plan developed by Department of Water Resources (DWR) and U.S. Bureau of Reclamation (Reclamation) submitted on May 21, 2009 in compliance with Order WR 2009-0033.

- On May 18, 2009, Division staff received a petition for temporary change for a 12,000 af water transfer from Placer County Water Agency and Sacramento Suburban Water District to the DWR 2009 DWB. Staff anticipates issuing a notice by next week.
- On May 6, 2009, Division staff received a petition for temporary change for a 20,000 af water transfer from Placer County Water Agency to the San Diego County Water Authority. On May 14, 2009, Division staff issued public notice to the petitioner for publishing. Comments are due by June 15, 2009.

The Division continues to report these activities on a weekly basis to the Governor’s Drought Action Task Force.

Delegation Authority: The State Water Board has delegated specific actions relating to the general operation of the water rights program to the Deputy Director for Water Rights. (See Resolution 2007-0057.) Each month, mid-month, the Division of Water Rights posts on its webpage a report on the actions it has completed in the previous month. The table below provides a summary of the activities of the Division from July 2008 through April 2009. Information on activities completed in May will be posted mid-June. Permitting, Licensing, Petition, Transfer, Monitoring and Reporting, and proposed Enforcement activities are delegated or conditionally delegated to the Deputy Director for Water Rights. Water Quality Certification activities are delegated to the Executive Director. In general, a conditionally delegated activity is delegated unless the affected water right holder is entitled to a hearing on the action and a hearing is requested.

	FY 2008-2009	April 2009
Permitting		
Applications Rejected	21	8
Applications Cancelled	24	2
Registrations Issued	20	1
Registrations Renewed	114	22
New Statements Processed	137	15
New Groundwater Recordations Processed	57	0
Permits Issued	11	1
Temporary Urgency Permits Issued	2	0
Licensing		
Licenses issued	41	3
Petitions		
Time extension Orders Issued	2	0
Change Orders Issued	18	2
Transfers Approved¹		
Orders Issued on Temporary Urgency Change Petitions	8	1
Orders Issued on Temporary Change for Transfer Petitions	6	1
Orders Issued on Long Term Transfer Petitions	0	0

¹ Transfers may also be accomplished under change petitions filed pursuant to Water Code section 1700 *et seq.*

Monitoring and Reporting		
Annual Reports of Permittee and Licensee Processed	3133	592
Supplemental Statement of Diversion & Use Processed	153	0
Annual Groundwater Recordation Processed	703	0
Ownership Changes Processed	938	55
Enforcement		
Permit and License Revocations Issued	100	12
Complaint Actions Closed	33	3
Cease and Desist Orders Issued	6	2
Administrative Civil Liability Complaints Issued	5	1
Administrative Civil Liability Orders Paid	3	1
Settlement Agreement Orders Issued by Executive Director	2	0
Water Quality Certifications		
Certifications on FERC projects	4	0
Application Denials on FERC projects	0	0
Certifications on Non-FERC projects	5	1
Application Denials on Non-FERC projects	0	0
Adjudicatory		
Division Decisions Issued	0	0
Orders on Petitions for Reconsideration by the Executive Director	12	2
Administrative Records Completed	0	0

OFFICE OF RESEARCH, PLANNING AND PERFORMANCE

Water Board Training Academy: While the Training Academy has a heavy class schedule this month, it will lighten up as we head into the summer months. A few of the upcoming classes include:

<p>Currently Scheduled*</p> <p><i>June</i></p>	<p>Vapor Intrusion Pathway: A Practical Guideline - Vapor intrusion is characterized as the migration of volatile chemicals from the subsurface into overlying structures. The simplicity of this definition belies the magnitude of resources being expended to address this complex exposure pathway. Led by internationally recognized experts, this 2-day training will enable participants to:</p> <ul style="list-style-type: none"> ▶ Learn the latest strategies to conduct site screening and investigations ▶ Apply multiple lines of evidence to ensure quality decision-making ▶ Build solutions for VI issues through understanding of mitigation options ▶ Network with environmental professionals ▶ Learn about new U.S. EPA VI developments Interactive learning with hands-on exhibits, classroom exercises, and frequent Q&A sessions will reinforce these course objectives and contribute to a practical understanding of this difficult pathway.
	<p>Introduction to ArcGIS - GIS allows professionals to analyze and manage spatially distributed data more effectively than ever before. This class will show how desktop GIS software (ArcGIS) can be used for displaying and analyzing groundwater and surface water monitoring data, grants, permits and water rights.</p>

	Dry Cleaner Workshop “Finding the Money” - The purpose of this workshop is to provide current information related to ‘finding the money’ to investigate and cleanup dry cleaner facilities. The workshop will cover actual monetary sources that have been used such as orphan funds, insurance policies, cities, developers, redevelopment agencies, water purveyors, grants, loans, and the U.S. EPA PA/SI program. An introduction to insurance policies will be presented, discussing how they work, what they cover, and approach strategies. The “Ability to Pay” analysis will be explained from both the State Water Resources Control Board (SWRCB) perspective and the Department of Toxic Substances Control (DTSC) perspective.
<i>July</i>	Hydromodification 101 - This class is designed to help participants understand the influence of watershed disturbance on receiving waters and methods to analyze and mitigate physical impacts.
	Making the Transition to Supervision - This one-day workshop is designed to review key principles with staff whose career goals include assuming a formal leadership role at the Water Boards. The content will introduce them to the role of the supervisor, the variety of skills it takes to be successful, and the challenges as well as opportunities associated with a supervisory role. During the workshop participants will assess their interest, readiness, and ability to do this kind of work, and develop an action plan on how to better prepare themselves to assume a formal leadership role.

*For more listings, go to the Academy’s web site <http://waternet/training/>

Academy staff is also hard at work developing training for wastewater treatment plant operators south of the border to be held later this summer. As a part of the Governor’s commitment to cross-border collaboration, the Water Boards will be convening a week long education program that will include both classroom and field training.

Reports: FY 2008-2009 Performance Report: The staff are working on the format and content of the Water Boards’ First Annual Performance Report. The report, to be released later this summer, will present measures of performance for key Water Board programs. As a first year effort, this web based report will primarily display our program outputs. For the coming years, performance targets will be established, tracked and reported on. Once released, we will be looking for the public’s input on how the Water Board’s measures should evolve to describe the outcomes of our actions on the environment.

Workshops: Urban Water Reuse: The State Water Board will conduct a workshop on June 17 to support implementation of measure “W-4 Reuse Urban Runoff” from the AB 32 Climate Change Scoping Plan adopted by the Air Resources Board in December 2008. The purpose of this workshop is to generate discussion and suggestions on approaches to advancing infiltration and capture of runoff to increase local water supplies. The full agenda for this workshop can be found at: http://www.waterboards.ca.gov/water_issues/programs/climate/docs/061709_workshop/agenda.pdf. More information on the Water Board’s climate related activities can be found at: http://www.waterboards.ca.gov/water_issues/programs/climate/

DIVISION OF ADMINISTRATIVE SERVICES

Budget:

The Governor proposed \$21 Billion of New Budget Solutions in the May Revise. The impact to the Water Boards comes from the two day furlough and the elimination of 5,000 general fund positions. The two day furlough will save approximately \$2.8 million from our general fund. The abolishing of general fund positions, 22, will save approximately \$2.3 million from the general fund. The Governor has also proposed a 5% reduction in pay for state employees and this will result in an estimated \$1.5 million in general fund savings. The total general fund savings proposed by the Governor for the 2009-10 fiscal year are estimated to be \$6.6 million, or 16% of our \$40.3 million general fund budget.

DIVISION OF FINANCIAL ASSISTANCE

American Recovery and Reinvestment Act of 2009: The State Water Resources Control Board (Water Board) received and accepted a grant of \$280 million in American Recovery and Reinvestment Act (ARRA) funds for the Clean Water State Revolving Fund (CWSRF) on May 21, 2009. The Water Board will provide the funds to water quality projects eligible for the CWSRF in the form of grants, zero-percent and one-percent loans. The Water Board will emphasize sewer projects in disadvantaged communities and bond projects affected by the stop work order issued in December by Department of Finance. The funds will be in addition to the funds normally distributed by the CWSRF. CWSRF normally finances a quarter billion dollars or more in low-interest loans yearly.

2009 California Financing Coordinating Committee (CFCC) Funding Fairs: The CFCC completed its annual Funding Fairs. CFCC conducted five Funding Fairs throughout California (Chino - February 3; Bakersfield - February 5; Eureka - March 10; Merced - April 2; and Sacramento – May 7). The CFCC is comprised of seven member agencies (six state, one federal), whose members conduct statewide Funding Fairs each year to educate interested parties about the CFCC and available financial and technical resources. Information on the 2009 Funding Fairs, including a copy of the presentation booklet, is available on the CFCC webpage at: www.cfcc.ca.org.

20x2020 Agency Team on Water Conservation: On April 30, 2009 the 20x2020 Agency Team released its draft 20x2020 Water Conservation Plan to meet the Governor's goal of reducing urban per capita water use by 20 percent by 2020. The public comment period was extended from May 22 to June 5, 2009. A public workshop on the plan was held in Sacramento on May 29. The State Water Board is one of six state members and one federal member of the 20x2020 Agency Team. Refer to http://www.waterboards.ca.gov/water_issues/hot_topics/20x2020/index.shtml.

Small and/or Disadvantaged Community Wastewater Needs: On June 11, 2009, State Water Board's Division of Financial Assistance, Division of Water Quality, and Office of Enforcement met with small and/or disadvantaged community representatives to discuss the implementation of actions identified in Resolution 2008-0048, Promoting Strategies to Assist Small and/or Disadvantaged Communities with Wastewater Needs. Staff solicited input on progress made to date, as well as other ideas to further assist small and/or disadvantaged communities with their wastewater needs. Staff plans to provide an information item update to the State Water Board regarding this subject at its July 7, 2009, meeting.

Underground Storage Tank Cleanup and Cleanup Fund Programs Task Force: A general meeting was held on June 11, 2009, in the Byron Sher Auditorium to form the UST Cleanup Task Force and brainstorm issues and priorities. Two task forces were developed, one on the Cleanup Fund Program and one on the UST Cleanup Regulatory Program. A list of issues and priorities was developed to guide the Task Forces. These task forces were created at the direction of the State Water Board at its board meeting on May 19, 2009. The groups are to report final recommendations to the State Water Board by January 1, 2010. As issues are identified, staff will bring items requiring immediate board action to a regularly scheduled meeting of the State Water Board.

Division Approvals: The Deputy Director of the Division approved the following from May 7, 2009 to June 5, 2009.

American Recovery and Reinvestment Act Financing Agreements

Entity	Preliminary Funding Commitment	Project	Approved
City of Delano	Wastewater Plant Upgrade and Expansion	\$33,418,792	5/22/09
San Andreas Sanitary District	2008 Wastewater Treatment Plant Upgrade Project	\$10,575,496	5/27/09
Gold Ridge Resource Conservation District	Estero Americano Sediment Reduction Project	\$219,491	6/4/09
Gold Ridge Resource Conservation District	Estero Americano Rangeland Water Quality Enhancement Project	\$697,450	6/4/09
City of Millbrae	Water Pollution Control Plant Renovations Project	\$34,000,000	6/5/09

Cleanup and Abatement Account Commitments

Entity	Preliminary Funding Commitment	Project	Approved
	None to Report		

BOARD MEMBER DIRECTIVES

A list of Board Member directives (assignments made by Board Members) during Board meetings) is attached as Appendix 3.

Appendix 1

Statewide Policies/Significant General Permits

Division of Water Quality		
A	Anti-Degradation Policy / Implementation Triennial Review	Scoping meeting held on 11/17/08. Reviewing the 30+ comment letters received. Preparing recommendation for the Board.
A-09	Aquatic Pesticide General Permit – Vector Control, Aerial Application	Drafting permit for public release.
A-10	Aquatic Pesticide General Permit – Vector Control, Aquatic Application	Work delayed, will follow Aerial Application permit.
A-10	Aquatic General Permit – Weed Control, Aquatic Application	Work delayed, will follow Aerial Application permit.
P	Aquifer Storage and Recovery Policy	Pending completion of Landscape Irrigation Permit.
A-09	Areas of Special Biological Significance (ASBS): Special Protections	Economic estimates done. Preparing CEQA initial study. Delayed by PRA request. Public hearing August 2009 (tentative).
A-09	Bacterial Objectives for Inland Surface Waters	Scoping meetings held 10/6/08 & 10/22/08; comment period closed 11/5/08. Staff preparing draft policy and staff report.
C	Blue-Green Algae Guidance	Revisions completed in September 2008 and posted on website.
A	Bio-indicator Development	Preparing initial planning effort for future development work.
A-09	Cadmium Objective and Implementation Policy	Scoping meeting held 10/6/08; comment period closed 10/23/08. Staff preparing draft policy and staff report.
A-10	Chlorine Residual Objectives and Implementation Policy	Delayed by loss of key staff. Scientific Peer review received. Report and policy will be revised as necessary to address peer review comments.
C	Compliance Schedule Policy	Approved by USEPA – completed.
A	Compost (Green Waste) – with Reg 5	Gathering information and working on initial draft.
P	Grazing	No Statewide effort at this time, Regions are issuing watershed based waivers.
A-09	Landscape Irrigation / Incidental Runoff Permit	Revised permit released 5/7/09. Public hearing held 5/19/09. Consideration scheduled for July 7 Board Meeting.

A-09	Listing Policy Update (Sediment Quality Objectives)	Targeting release Summer, 2009.
A	Marina Permit	Initial drafting and data gathering.
A	Mercury Offset Policy	Preparing economic analysis (SAIC)
P	Methylmercury Objectives	Delayed by loss of key staff. Preparing economic analysis (SAIC).
A	Nutrient Numeric Endpoints Tools	Freshwater: to be peer reviewed. Estuaries: performing validation studies (SCWRRP and TetraTech)
A	Ocean Plan Amendment: non-substantive	Public hearing scheduled 6/16/09.
A	Ocean Plan Amendment: monitoring & desal provisions	Pending completion of Ocean Plan Amendment: non-substantive.
A	Ocean Plan Amendment: vessel provisions	Pending completion of other Ocean Plan Amendments.
A-09	Once-Through Cooling (316b) Policy	Working on CEQA document (TetraTech); waiting for interpretation of Supreme Court decision on federal 316b regulations.
A	Onsite Waste Water Treatment Regulations/Waiver	Comment period closed; reviewing comments and preparing revision based on comments.
A	Rapid Diagnostic Tests for Bacterial Indicators in Coastal Waters	Assessing tests (SCCWRP study).
C	Recycled Water Policy	Approved by OAL on 5/14/09. Preparing memo to Regional Boards regarding implementation. Complete.
A-10	Sanitary Sewer Overflow (SSO) WDR Update	Scheduling staff workshops for August, 2009.
C	Sediment Quality Objectives (SQOs) for Enclosed Bays and Estuaries: Phase I	Phase I completed, adopted by State Board, approved by OAL on January 5, 2009. Submitted to USEPA for approval.
A	Sediment Quality Objectives (SQOs) for Enclosed Bays and Estuaries: Phase II	Phase II staff draft released.
P	Sediment Quality Objectives (SQOs) for Enclosed Bays and Estuaries: Phase III	Pending completion of Phase II and availability of funding
A-09	Storm Water CalTrans Permit	In progress.
A-09	Storm Water Construction Permit	Held Public Hearing on 6/3/09. Considering comments.
P	Storm Water Industrial Permit	Pending completion of construction permit
A-09	Storm Water Linear Permit	To be included in construction permit.
A-09	Storm Water MS4 Effectiveness Guidance (AB 739, Laird)	Working with Storm Water Task Force to develop guidance. Task Force guidance delayed until Summer.
A	Storm Water MS4 Phase II Permit	In progress

P	Suction Dredge General Permit	On hold, and working instead with Dept of Fish and Game to coordinate with their suction dredge permitting program.
A-10	Toxicity Control Provisions for the SIP	Working with U.S. EPA on preparing policy. Evaluating alternative methods for determining compliance. Preparing draft policy alternatives and environmental documents.
C	Vessel General Permit – Certification	Issued 401 certification with state conditions on December 17, 2008. Completed.
C	Vessel General Permit – Revised Certification	Revised 401 Certification in February 2009 to reflect USEPA's final permit and make clarifying edits.
A-10	Wetlands and Riparian Areas (Dredge and Fill) Policy – Phase I	Stakeholder meetings held December, 2008. Development Team (R1, R2, DWQ) drafting Phase I policy. Planning for Board adoption Winter of 2010.
P	Wetlands and Riparian Areas Policy – Phase II	Pending completion of Phase I.
P	Wetlands and Riparian Areas Policy – Phase III	Pending completion of Phase II.
P	Winery Waste Guidance	Pending response from Wine Institute; staff redirected to Water Recycling Policy
A-10	Adoption of the 2008 (really 2010) Integrated Report	Regions are adopting their lists and preparing to submit.

Status Code Key:

White = Active effort (A)

Yellow = Targeted for completion in 2009 (A-09)

Green = Targeted for completion in 2010 (A-10)

Blue = Completed (C)

Grey = Suspended or No statewide effort at this time or Pending (P)

Division of Water Rights		
Status Code	Policy/Significant General Permit	Status
.	Delta Water Quality Control Plan Review, Update, and Implementation	CEQA Scoping meeting March 30, 2009; workshop for San Joaquin River flow and southern delta salinity on April 22, 2009.
A-09		Prepare periodic review of Bay-Delta Plan and present to State Board to consider for adoption.
A-09		Develop plan for water quantity/quality modeling, and hold public meetings to update and solicit input.
A-09		Preparing request for qualifications for preparation of CEQA documents
A-09		Complete Dr. Hoffman's crop salinity tolerance study and initiate transient-state model evaluation.
A-09	Delta Water Quality Policy...	
A	North Coast Instream Flow Policy	Sensitivity analysis nearing completion. Reviewing 600+ public comment letters. Preparing responses to comments. Received a proposed alternative from stakeholder representatives for the State Water Board's consideration in developing the policy. Reviewing this proposal with anticipation of having it formally peer reviewed.

Status Code Key:

White = Active effort (A)

Yellow = Targeted for completion in 2009 (A-09)

Blue = Completed (C)

Grey = Suspended or No statewide effort at this time or Pending (P)

Office of Enforcement		
Status Code	Policy/Significant General Permit	Status
C	Policy on Supplemental Environmental Projects	Approved by Board on February 3, 2009 – will be submitted to OAL for approval.
A-09	Enforcement Policy	Staff is preparing to circulate draft Policy in anticipation of June 4th Board Workshop.

Status Code Key:

White = Active effort (A)

Yellow = Targeted for completion in 2009 (A-09)

Blue = Completed (C)

Grey = Suspended or No statewide effort at this time or Pending (P)

Division of Financial Assistance

Policy/Significant General Permit	Status
Clean Water State Revolving Fund Regulations	Under development. Process has slowed considerably to accommodate getting the Stimulus fund out to projects. Currently project 2010/2011
Orphan Site Cleanup Fund (OSCF) Proposed Rulemaking Package	Posted on UST Cleanup Fund website; 45 day comment period ended March 31, 2009. The final regulations will be considered by the Board at its July 7, 2009 meeting.
Wastewater Treatment Plant Classification, Operator Certification, and Contract Operator Registration Regulations	Regulations are drafted, but being held waiting fiscal considerations. Anticipate being released for public review in Spring 2010.

Targeted for completion in 2009

Completed Items

Suspended / No statewide effort at this time

North Coast Regional Water Board (R1)		
Status Code	Policy/Significant General Permit	Status
A-09	Renewal/Update Categorical Waiver for non-industrial Timber Harvest Activities	For adoption in June 2009
A-09	Integrated Report	For adoption in July 2009
A-09	Renewal/Update Categorical Waiver for USFS Timber Harvest Activities	For adoption in September 2009
A-09	Revised DO Objective for Klamath	First hearing before the Regional Board October 2009
A-09	Klamath River Temp., DO, Nutrient TMDLs	First hearing before the Regional Board October 2009
A-09	General WDR for In-Situ Treatment of Contaminated Groundwater	For adoption in December 2009
A-09	Low Threat Discharge Amendment	For adoption in July 2009
A-09	Low Threat General Permit	For adoption in July 2009
A-09	MS4 for Santa Rosa	For adoption Oct 2009
A-09	MOU with USFS for Scott Valley non timber activities	EO signature in June 2009
A-09	Internal procedures to streamline clean up and closures of underground tank sites	EO signature in August 2009
A-10	Editorial (Non-Regulatory) Amendment	2010
A-10	Update Groundwater Objective	2010
A10	Elk River TMDL	2010
A10	Regulatory framework for dairies	2010
A10	Siskiyou county road waiver/permit	2010
A-10	Region-wide DO objective	2010
P	Region-wide Sediment Amendment	Piloting in the Elk and Klamath TMDLs
P	Stream and Wetlands Policy	Region 2 lead
P	In-stream Flow Objective	Unscheduled, to be part of Stream and Wetlands Policy
P	Mixing Zone	Unscheduled
P	Hatcheries Amendment	Will initiate work in 2009
P	Freshwater TMDL	Under development
P	Laguna de Santa Rosa TMDL	Under development

San Francisco Regional Water Board (RB2)		
Status Code	Policy/Significant General Permit	Status
A-09	Basin Plan amendment to update bacterial standards for SF Bay to make consistent with those in Ocean Plan.	Work on Staff Report, implementation plan, and amendment language underway.
A-09	Basin Plan amendment for Beneficial Use update.	Basin Plan amendment being drafted. Staff have invited public input via Lyris email notices and web site postings; communicated with resource agency employees across the region; and solicited input from each technical division in-house.
A-10	Stream and Wetland Systems Protection Policy	Basin Plan amendment and supporting Staff Report being drafted. Coordinating Regional Water Board policy with State Board Wetland and Riparian Area Protection Policy.
A-09	General NPDES Permit for discharge of groundwater from the cleanup of volatile organic compounds	Scheduled for Board hearing August 2009, draft permit currently posted at http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/tentative_orders.shtml
A-09	Municipal Regional Stormwater Permit to reissue 6 MS4 Phase I permits	Plan to go to the Board in September for an adoption hearing
A-09	Multi-year stream maintenance permit to Sonoma County Water Agency	Plan to go to the Board in September; work closely with R1 staff on a similar permit to be considered in July by R1
A-10	Napa/Sonoma Grazing Waiver	Staff meeting with local agencies and other representatives, inspections & site visits. Expect Board adoption in summer 2010.
A-10	Napa/Sonoma Vineyard Waiver	Initial drafting of the waiver for internal review is in progress. Stakeholder communication plan is in development. Expect Board adoption in late 2010.

Central Coast Regional Water Board (R3)

Status Code	Policy/Significant General Permit	Status
A-09	Timber permitting streamlining	On July 10 Regional Board agenda
A-09	On site system Basin Plan Amendment (update of 25-year old criteria) and waiver	Approved by Regional Board; submitted to State Board
A-09 & A-10	Ag Regulation	Will recommend extension of existing Ag order at July 10 Regional Board meeting. Have ongoing advisory group meetings while staff is developing update to existing order.

Los Angeles Regional Water Board (R4)

Status Code	Policy/Significant General Permit	Status
P	General NPDES Permit for Discharges from Potable Water Distribution and Water Supply Systems to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.	This tentative permit was scheduled for March 5, 2009 Board meeting. The permit includes new requirement for regulation of potable water distribution system discharges, in addition to discharges from potable water supply wellheads. Due to lack of a Regional Board Quorum it has been referred to SWRCB for their consideration.
C	General NPDES Permit for Discharges of Nonprocess Wastewater to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.	Adopted April 3, 2009. This general permit introduced new effluent limitations to regulate iron and manganese in filter backwash wastewater from water treatment facilities.
A-09	General NPDES Permit for Discharges of Low Threat Hydrostatic Test Water to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.	Scheduled for June 4, 2009 Board meeting. This is a renewal of the waste discharge requirements. No significant new issue is included in this tentative permit
A	Los Angeles Region Conditional Waiver for Irrigated Lands (Order No. R4-2005-0080)	The Los Angeles Region Conditional Waiver for Irrigated Lands (Order No. R4-2005-0080) was adopted by the Regional Board on November 3, 2005. The Conditional Waiver has a five-year term. Growers/landowners may choose to enroll under the waiver individually or as a member of a Discharger Group. The vast majority of growers elected to enroll as a member of a group. The Regional Board has approved two Discharger Groups, the Ventura County Agricultural Irrigated Lands Group and the Nursery Growers Association - Los Angeles County Irrigated Lands Group. These groups have completed two years of water quality monitoring and are currently implementing Water Quality Management Plans, which include BMPs to mitigate discharges from agriculture lands to waters of the state. Water quality monitoring is ongoing throughout the term of this waiver. Growers and/or landowners who failed to enroll under the Conditional Waiver were sent a Notice of Violation (NOV). Many growers/landowners responded to the NOV and enrolled in the program. Recently, five ACLs were issued to growers/landowners for failure to enroll in the program. Staff plans to continue enforcement actions, as necessary, to ensure the integrity of the program.

Central Valley Regional Water Board (R5)		
Status Code	Policy/Significant General Permit	Status
A	Implement Mercury TMDL/Control Program in Cache Creek Watershed - Sacramento River and San Joaquin River Basin Plan	Mercury hot spot surveys completed in 2009 and an abatement project has been implemented at Abbott Mine. Additional abatement projects are planned for other mines potentially to be implemented by June 2012.
A	Establish New Water Quality Objectives and Total Maximum Daily Loads for Salinity and Boron in the Lower San Joaquin River - Amendment to the Sacramento River and San Joaquin River Basin Plan.	Regional Board completed CEQA Scoping meeting in March 2009
A	Establish Organochlorine Pesticides TMDL Control Program in Several Central Valley Waterbodies - Amendment to the Sacramento River and San Joaquin River Basin Plan	Regional Board scheduled CEQA Scoping meeting for July 2009
A	CV-SALTS – Developing a Salinity and Nitrate Management Plan for all basins in the Central Valley – Basin Plan Amendment for the Sacramento River and San Joaquin River Basin Plan, Tulare Lake Basin Plan and the Delta Water Quality Control Plan	Preparing for CEQA Scoping meeting by Fall 2009. BPA consideration by Board in 2012
A	Evaluate Municipal and Domestic Supply Beneficial Uses for Atwater Drain - Amendment to the Sacramento River and San Joaquin River Basin Plan	Conducting technical investigations.
A-09	Small Winery and Food Processor GENERAL ORDER or waiver	Being Drafted

Central Valley Regional Water Board (R5 – cont.)

Status Code	Policy/Significant General Permit	Status
A-09	Groundwater Strategy	Recently started, will include public participation
A-09	(Name of Policy, General Permit, or Waiver)	
A-09	Revise Water Quality Objectives for pH and Turbidity - Amendment to the Sacramento River and San Joaquin River Basin Plan	At USEPA for approval
A-09	Determine Certain Beneficial Uses are not Applicable and Establish Water Quality Objectives in Sulphur Creek - Amendment to the Sacramento River and San Joaquin River Basin Plan	At USEPA for approval
A-09	Development of the Delta Regional Monitoring Program	Staff developing short and long-term alternatives for Regional and State Board consideration by December 2009.
A-09	Non-Regulatory Amendment to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins to Correct Editing Errors and Update Language	Amendment scheduled for Regional Board consideration in August 2009.
A-09	Integrated 303(d)/305(b) Report	Integrated Report scheduled for Regional Board consideration in June 2009
A-10	NPDES Fish Hatcheries General Order	Actively Under Development
A-10	Basin Plan Amendment – City of Colusa (removal of MUN from surface water body)	Actively Under Development
A-10	Sacramento Regional County Sanitation District – NPDES Permit Renewal	In progress. Controversial permit renewal. Largest, inland surface water discharger in Central Valley to Delta. Staff currently working with State and Federal agencies in reviewing facility discharge and receiving water data.

Central Valley Regional Water Board (R5 – cont.)		
Status Code	Policy/Significant General Permit	Status
A-10	Irrigated Lands-Long Term Program Development	A stakeholder advisory group has been formed to provide input on programmatic alternatives for the Long Term Irrigated Lands Regulatory Program. Workgroup members and Regional Board staff have drafted potential ground water and surface water alternatives. A programmatic EIR should be presented to the Central Valley Water Board by December 2010
A-10	Rubicon Trail-Cleanup and Abatement Order-El Dorado County and Eldorado National Forest	Highly controversial matter. Nationally recognized OHV trail recently situated in the El Dorado National Forest is subject to a Cleanup and Abatement Order to establish a plan to protect water quality. The County and Forest Service required to complete Saturated Soil Water Quality Protection Plan by October 2010. USFS has petitioned State Board to remove their name from the order.
A-10	Waste Discharge Requirements for Westlands Water District (potentially controversial)	Waste Discharge Requirements from Irrigated Agricultural lands and associated reverse osmosis treatment units. In discussion with Westlands. Individual Order to regulate surface and groundwater discharges from irrigated ag.
A-10	General Order for Poultry Facilities (potentially NPDES in accordance with Federal CAFO regulations)	General Order (or group of orders) for poultry raising and egg laying facilities. Multiple orders may be needed to address the different types of facilities and their dischargers. Not yet started, but requested by poultry industry.
A-10	New winery waste guidelines	In discussion with Industry
A-10	Sand/gravel wash water to land GENERAL ORDER or waiver	Not yet started
A-10	External Groundwater Monitoring Workgroup	Have assembled a group of groundwater monitoring experts to provide input on how the Regional Water Board addresses complex groundwater monitoring issues.

Central Valley Regional Water Board (R5 – cont.)		
Status Code	Policy/Significant General Permit	Status
A-10	Delta Methyl Mercury and Total Mercury TMDL Control Programs - Amendment to the Sacramento River and San Joaquin River Basin Plan	Scheduled for Regional Board consideration in Jan/Feb 2010
A-10	Establish Site-Specific Objectives for Chloroform, Chlorodibromomethane and Dichlorobromomethane for New Alamo and Ulatis Creeks and Permit Implementation Provisions - Amendment to the Sacramento River and San Joaquin River Basin Plan	To be submitted for peer review. Tentatively scheduled for Regional Board consideration in July 2010
A-10	Central Valley Pesticide TMDL Control Plan - Amendment to the Sacramento River and San Joaquin River Basin Plan	Amendment addressing chlorpyrifos and diazinon in hundreds of valley floor rivers, streams and creeks scheduled for Regional Board consideration in June 2010. Other pesticides will be considered in 2011.
A-10	Drinking Water Policy for the Central Valley	Staff working with stakeholder group on a policy for Regional Board consideration by December 2010.
A-10	Revise Selenium Control Program - Amendment to the Sacramento River and San Joaquin River Basin Plan	CEQA Scoping meetings held in 2008.
C	NPDES Low Threat General Order	Actively Used (R5-2008-0081)
C	NPDES Limited Threat General Order	Actively Used (R5-2008-0082)
C	NPDES Petroleum Clean Up General Order	Actively Used (R5-2008-0085)

Central Valley Regional Water Board (R5 – cont.)

Status Code	Policy/Significant General Permit	Status
C	General Order for In-Situ Groundwater Remediation at Sites with VOCs, nitrogen compounds, perchlorate, pesticides, semi-volatile compounds, hexavalent chromium and/or petroleum hydrocarbons.	General WDRs for in-situ groundwater remediation/cleanup are actively used. This permit a) applies to a wide variety of pollutants; b) simplifies the application process for dischargers; c) allows efficient use of Regional Board staff time.
C	Implementation of San Joaquin River at Vernalis Salt and Boron Control Program through MAA with Reclamation - Sacramento River and San Joaquin River Basin Plan	In December 2008, the Regional Board entered into a management agency agreement (MAA) with the US Bureau of Reclamation (Reclamation) to address salt imported via the Central Valley Project. A Draft Compliance Monitoring and Evaluation Plan (including the first quarterly report) was released in May 2009.
P	Evaluate Municipal and Domestic Supply Beneficial Uses for Groundwater in the vicinity of the Littlejohns Fault and Establish Groundwater Protection Regulations for these Site-Specific Conditions - Amendment to the Sacramento River and San Joaquin River Basin Plan	Pending execution of a reimbursement agreement.

Lahontan Valley Regional Water Board (R6)		
Status Code	Policy/Significant General Permit	Status
A-09	Renew Waiver of filing a report of waste discharge and obtaining waste discharge requirements for septic systems in the Lahontan Region	Scheduled for October 2009
A-10	Renew Waiver of filing a report of waste discharge and obtaining waste discharge requirements and associated Memorandum of Understanding with the Tahoe Regional Planning Agency regarding construction and new development in the Lake Tahoe Basin	Scheduled for January 2010.
A-10	Basin Plan Amendment and TMDL adoption for Lake Tahoe Sediment and Nutrient TMDL	Scheduled for May 2010
A-10	Basin Plan Amendment to provide exemption criteria to allow aquatic pesticides in the Lahontan Region for specific circumstances	Scheduled for May 2010
A-10	Basin Plan Amendment to lift pier prohibition in spawning habitat and address shorezone impacts at Lake Tahoe	Amendment and environmental analyses in development. Action by Water Board anticipated in Spring 2010 pending results of two lawsuits filed against TRPA's action on shorezone development at Lake Tahoe.
A-10	Basin Plan Amendment to revise waste discharge prohibitions concerning Lake Tahoe and the Truckee River hydrologic units	Scheduled for March 2010
A-10	Update Lake Tahoe Basin Municipal Storm Water NPDES Permit	Scheduled for October 2010
A-10	Update Lake Tahoe Basin Construction Storm Water NPDES Permit	Scheduled for October 2010
C	Region-Wide Timber Waiver	Completed May 2009

Colorado River Regional Water Board (R7)

Status Code	Policy/Significant General Permit	Status
A-09	General NPDES Permit, Waste Discharge Requirements for Discharges of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Volatile Organic Constituents into Surface Waters Within the Colorado River Basin Region	Schedule for Regional Board consideration of adoption September 2009.
A-09	GENERAL NPDES Permit, Waste Discharge Requirements for Low Threat Discharges to Surface Waters Within the Colorado River Basin Region	Schedule for Regional Board consideration of adoption September 2009.

Santa Ana Regional Water Board (R8)

Status Code	Policy/Significant General Permit	Status
A-09	Task Force to Develop Monitoring Program for Emerging Contaminants	The Emerging Contaminants Task Force expects to complete proposed monitoring programs for emerging contaminants and personal care products, for surface water and groundwater wastewater discharges, as well as for imported water used in groundwater recharge projects, before the end of 2009. The proposed emerging contaminants monitoring programs would be presented for consideration by the Regional Board.

San Diego Regional Water Board (R9)		
Status Code	Policy/Significant General Permit	Status
A	Tijuana River Valley Trash and Sediment Project	The Recovery team, consisting of local, state, and Federal agencies is coordinating, directing, and overseeing efforts to identify and remove trash and sediment in the valley. The team's efforts also include prevention of sediment and trash into the valley and the long-term restoration of the river/lagoon/watershed system.
A-09	Hydrostatic Testing and Potable Water Discharge General Permit— NPDES Permit Reissuance	Targeted for reissuance August 8, 2009
C	Desalination Facility—Seawater Intake Impingement and Entrainment Analysis and Development of a Minimization and Mitigation Plan	April 8, 2009 Regional Board approved the Marine Life Mitigation Plan for the proposed desalination facility in Carlsbad proposed by Poseidon Resources, Inc.
A-09	General De Minimis Discharges NPDES Permit	Tentatively scheduled for the Regional Board consideration and approval on August 8, 2009
A	Ocean Discharge Receiving Water Monitoring Program Updates— Revisions to NPDES monitoring programs of POTW discharges to the Pacific Ocean	To be considered by the Regional Board in late 2009 or early 2010.
A-09	City of San Diego Pt . Loma Ocean Outfall NPDES Permit Reissuance	Regional Board scheduled to adopt this reissuance on June 10, 2009. This permit provides for a waiver of federal secondary treatment standards as recommended by the USEPA
A-09	US Navy Yards—San Diego Bay NPDES Permit Reissuance—3 Navy Yards—Coronado, Point Loma and Naval Base/San Diego	Regional Board scheduled to adopt permit reissuance for Coronado on June 10, 2009 and Point Loma and Navy Base SD on August 8, 2009
A-09	2008 Fed. CWA Section 303 (d) Listing of Water Quality Segments	Adoption of listing anticipated in late 2009
A-09	2008 Basin Plan Triennial Review	Tentatively scheduled for approval by the Regional Board on October 14, 2009

San Diego Regional Water Board (R9 – cont.)		
Status Code	Policy/Significant General Permit	Status
A-09	Gregory Canyon Landfill—Waste Discharge Requirements	Scheduled for adoption on October 14, 2009
A-09	Orange County MS4 Municipal Stormwater Permit Reissuance	Initial hearing scheduled for July 1, 2009 and final adoption for August 8, 2009
A-10	Riverside County MS4 Municipal Stormwater Permit Reissuance	Initial Hearing and adoption scheduled for the first half of 2010.
A-09	Carlsbad Energy Center Power Plant in Carlsbad—New NPDES Permit	New power plant facility utilizing dry cooling technology. Scheduled adoption late 2009
A-09	Total Max. Daily Load (TMDL) Tecolote Creek - Bacteriological	Hearing on Basin Plan Amendment scheduled September 9, 2009; adoption date not yet scheduled.
A	Agricultural Waiver of Waste Discharge Requirements-Conditional Waiver No. 4 Discharges from Agricultural and Nursery Operations	In May 2009 notification by mail to all agricultural and nursery operators of the need to conduct monitoring of water quality. The notification explains the option for the operators to join a monitoring group.
A	Lake San Marcos--Water Quality Improvement Project	Review proposal to improve water quality of the lake.
A-09	Hydromodification Policy	Staff working on a policy that will be an outgrowth of the hydromodification plan requirement in the tentative MS4 Permit for Orange County scheduled for adoption in either August or September 2009.
A-09	Dynegy Power Plant in So. San Diego Bay—NPDES Permit Reissuance	Scheduled for adoption on November 11, 2009

Status Code Key:

White = Active effort (A)

Yellow = Targeted for completion in 2009 (A-09)

Green = Targeted for completion in 2010 (A-10)

Blue = Completed (C)

Grey = Suspended or No statewide effort at this time or Pending (P)

Appendix 2

IRRIGATED LANDS REGULATORY PROGRAM MONTHLY REPORT June 2009

This month's Irrigated Lands Regulatory Program (ILRP) monthly report will provide an update on activities of the Central Valley Regional Water Quality Control Board (Central Valley Water Board) ILRP, as reported in the Central Valley Water Board's April 23-24, 2009 Executive Officer's report. Future ILRP monthly reports will alternate between the Central Coast, Los Angeles, Santa Ana, Colorado River Basin, San Diego, and Central Valley Regional Water Quality Control Board programs. English and Spanish translations of current and past ILRP program monthly reports can be found on the State Water Boards Irrigated Agricultural Waiver Program website:

http://www.waterboards.ca.gov/water_issues/programs/agriculture/

For specific program information, contact Mr. Joe Karkoski, program manager of the Central Valley Water Board ILRP, at (916) 464-4668.

For additional information on the statewide ILRP, please contact State Water Resources Control Board staff:

Johnny Gonzales	(916) 341-5510	jgonzales@waterboards.ca.gov
Gita Kapahi	(916) 341-5501	gkapahi@waterboards.ca.gov

CENTRAL VALLEY WATER BOARD IRRIGATED LANDS REGULATORY PROGRAM

(As reported in the Central Valley Water Board's April 23-24, 2009 Executive Officer's report)

Long-term Program / Environmental Impact Report (EIR)

On 17 February, staff conducted the third long-term program stakeholder advisory workgroup meeting. The meeting was facilitated by the Regional Water Board's contractor, CSU Sacramento Center for Collaborative Policy (CCP). At the 17 February meeting, workgroup participants presented proposed alternatives for the long-term program. Interest groups that presented alternatives included:

- Coalitions and commodity groups developed joint alternatives for surface and groundwater.
- Clean Water Action, California Rural Legal Assistance Foundation, and Community Water Center representatives developed a joint groundwater alternative.
- El Dorado County developed a "Low Threat" waiver alternative for discharge to surface water.
- South San Joaquin Valley Water Quality Coalition developed alternatives for surface and groundwater that are similar to those developed by the coalition and commodity groups.
- South San Joaquin Irrigation District commented that groundwater should not be a part of the irrigated lands program.

- Westlands Water District developed an alternative for discharges to ground and surface water.
- Westlands main concern is coordination between the long-term ILRP and the WDRs being developed for irrigated lands in Westlands.
- Wildlands Inc. developed an alternative for discharges to surface waters.

Staff will be working with these interest groups to develop the details of the alternatives for more in depth analysis and comment by the workgroup. Staff will also be developing additional alternatives, as necessary, to ensure that a reasonable range of alternatives is considered.

The next long-term program workgroup meeting is scheduled for 15 April 2009 and will be an informational session on nitrates in ground water.

On 28 January, staff met with Glenn and Butte County Agricultural Commissioners to discuss commissioner involvement in the long-term program. Glenn and Butte County Agricultural Commissioners will be meeting with coalition groups in the near future to pursue the development of a joint alternative that will include agricultural commissioners.

On 2 February, staff conducted a long-term program workgroup informational session. The session included presentations by Polly Lowry, Regional Water Board staff, and John Troiano, Department of Pesticide Regulation, on groundwater issues facing irrigated lands. Tess Dunham of Somach, Simmons and Dunn also lead a legal discussion on the statutory requirements of the long-term program. Terry Rivasplata from ICF - Jones and Stokes provided a presentation on the California Environmental Quality Act as it affects the long-term program. The informational session was well attended and received by the advisory workgroup.

On 4 March, staff met with representatives from Clean Water Action, California Rural Legal Assistance Foundation, and the Community Water Center, to discuss the details of their proposed groundwater alternative. Also on 4 March, staff met with representatives from El Dorado County, Upper Watershed, Rice Commission, and Sacramento Valley Coalition to discuss the "Low Threat" long-term program alternative developed by El Dorado County.

Staff has developed a series of draft groundwater nitrate summary maps using existing data from the Department of Pesticide Regulation, United States Geological Survey, Department of Water Resources, and Regional Water Board Dairy Program data. These maps graphically depict areas throughout the Central Valley where well data for nitrates exceeds Department of Public Health MCLs. These maps were developed to address comments received during the scoping phase of the long-term program and to assist in the development of the long-term program. Staff will be presenting these draft maps to the long-term program workgroup.

Enforcement

California Water Code section 13267 Orders

On 28 January 2009, the Executive Officer issued 15 Notices of Violations (NOVs) to landowners and operators in Sacramento, San Joaquin, Solano, and Yolo Counties for failure to respond to a CWC 13267 Order. The 13267 Orders required landowners to fill out a one page form briefly describing why their parcel was not enrolled in the ILRP.

On 29 January, 162 CWC §13267 Orders were issued to growers in Stanislaus and El Dorado Counties who were identified as not being enrolled in the ILRP. The recipients of these Orders were first issued an information postcard on 11 December 2008. Because they didn't respond to the postcard, they subsequently received 13267 Orders. On 30 December 2008, the Fresno Office sent CWC §13267 Orders to owners of 2,621 parcels representing approximately 229,000 acres (a total of 681 Orders). Owners of these parcels had been dropped from the 2008 Southern San Joaquin Valley Water Quality Coalition (Coalition) participant list by the Kern River sub-watershed. The Orders required recipients to submit a technical report by 20 February 2009 describing their irrigated lands. Seventy-one Orders were returned because of incorrect mailing addresses supplied by the Coalition. Follow-up correspondence was sent to 53 recipients of the Order who had not responded by 3 March 2009. As of 18 March 2009, 17 recipients who received the Order and follow-up correspondence have failed to respond. To date, the Fresno office has received responses from owners of 2,302 parcels (88%). Of those responses owners of 1,774 parcels (77% of respondents or 165,356 acres) want to reapply to the Coalition. Owners of the remaining 528 parcels (23% or 38,200 acres) have indicated that they have sold the property, have no potential to discharge, are covered under separate WDRs, or otherwise wish to remain off the Coalition's participant list. Seventy-one Orders have been resent with corrected mailing addresses requiring submittal of a technical report by 24 April 2009.

On 23 March, 33 CWC §13267 Orders were issued to growers in the Sacramento Valley and 42 Orders were mailed to landowners in the Delta Pilot Project area. These growers were identified as not being enrolled in the ILRP. The recipients of these Orders were first issued an information postcard giving them an opportunity to voluntarily enroll in the ILRP.

Outreach Postcards to Growers

On 10 March 2009, 110 postcards were mailed to growers in San Joaquin County's portion of the Legal Delta who are not currently enrolled in a coalition. The intent of the postcards is to inform growers of the ILRP and their responsibility for waste discharge from irrigated agriculture. The postcards provide a potentially more cost effective means (over 13267 Orders) to enroll non-participating growers in the ILRP. In addition, growers who apply to enroll in a Coalition in response to the postcard save \$150 on their application fee.

Applications for Regional Water Board Approval to Join Coalition Groups

Since January 2007, 564 applications have been submitted to the Regional Water Board, encompassing over 129,000 acres of land. On 2 February and 12 March, approval letters were mailed to applicants, thus allowing them to join Coalition Groups. This brings the total approved applicants to 498, encompassing 117,000 acres. Other applicants were either already members of coalition groups, withdrew their application, or their applications are pending review.

Coalition Groups

California Rice Commission (CRC)

On 17 February, the CRC was sent Monitoring and Reporting Program (MRP) Order No. R5-2009-0809, which will be in effect until 31 December 2009. The MRP Order is specific for the rice operations in the Sacramento Valley and includes an information sheet outlining the objectives and basis of the MRP order.

On 18 March 2009, the CRC was sent a letter on the review of its 2008 Annual Monitoring Report. Most items requiring corrections or missing data were closed. Two items referring to quality control data for analytical methods will be addressed in the new Quality Assurance Project Plan (QAPP) to be submitted by 17 April 2009 as required by MRP Order 2009-0809.

East San Joaquin Water Quality Coalition (ESJWQC)

On 10 February, staff met with the ESJWQC representatives to discuss the Management Plan progress and updates. This meeting is the first of a series of quarterly meetings. The ESJWQC updated staff on the number of growers contacted, number of acres represented, future expected changes in management practices, and an overall summary of the success of the "Individual Contact" strategy in the high priority/pilot watershed of Dry Creek at Wellsford Road. Given the rate of success in this watershed, the "Individual Contact" strategy will be applied to the other two priority areas: Prairie Flower Drain at Crows Landing Road and Duck Slough at Hwy 99, and subsequently to the remaining 20 sites identified in the Management Plan.

On March 1, the ESJWQC submitted its Semi-Annual Monitoring Report. Staff will be reviewing and preparing a response letter shortly.

Goose Lake Coalition

On 23 December 2008, staff received the Goose Lake Coalition's Semi-annual Monitoring Report, covering the monitoring period from April through August 2008. The SAMR fully met requirements of the ILRP, as stated in the Regional Water Board's response letter provided to the Coalition on 26 January 2009. The Coalition will begin monitoring under their new MRP Plan during spring 2009.

Sacramento Valley Water Quality Coalition (SVWQC)

On 26 January 2009 staff received the final version of the SVWQC Management Plan, which was approved by the Executive Officer on 2 February. Management Plan activities have been initiated by the Coalition. On 31 December 2008, the Coalition submitted their Semi-annual Monitoring Report. Staff comments are currently in prepared and will be provided to SVWQC. In mid-February, Northern California Water Agencies (NCWA) announced that they hired a new staff person and Coalition lead, Bruce Houdesheldt, to replace Tina Lunt.

On 11 February, staff provided an update on ILRP monitoring program and compliance activities during the Annual Growers Meeting of the Placer-Nevada-South Sutter-North Sacramento subwatershed group of the SVWQC in Auburn. The meeting agenda included items concerning the Subwatershed Group's budget, recent monitoring results, the 2009 monitoring plan, and a presentation from UCD Farm Advisors on management practices for row crops and orchards.

On 25 February, staff met with Bruce Houdesheldt, NCWA's new Coalition manager for the SVWQC. The purpose of this meeting was to become acquainted with Bruce and to provide him with an overview of the current status of Coalition tasks and work products for 2009.

On 26 February, staff attended the quarterly board meeting of the SVWQC's Colusa-Glenn subwatershed group in Willows. Agenda topics included January monitoring results, financial reports, the Glenn County RCD's Outreach and Education update and 2009 tasks, the subwatershed Field Tour on March 19, the Coalition's recently approved Management Plan, and how managed wetlands will be addressed in the Long-term ILRP.

On 27 February, staff participated in a Dixon/Solano Subwatershed field tour provided for new Water Board and NCWA staff. The tour group included John Currey (Dixon RCD), Jim Allan (Solano Agricultural Commissioner), Walt Cheecho (NRCS), Chris Rose (Solano RCD), and Bruce Houdesheldt (NCWA). John Currey provided an overview of the sub-watershed's irrigation systems and Coalition monitoring sites. Participants were then provided a driving tour of the major features of agricultural operations in the area, including stops at water diversion features and water quality monitoring stations.

On 3 March, staff participated in a Yolo Subwatershed field tour provided for new Water Board and NCWA staff. The tour group included Tim O'Halloran (Yolo County Flood Control and Water Conservation District), Denise Sagara (Yolo County Farm Bureau), Rick Landon (Yolo Agricultural Commissioner) and Bruce Houdesheldt (NCWA). Tim O'Halloran provided a comprehensive overview of the Yolo Flood Control District's irrigation and drainage system. Participants were provided a driving tour of agricultural irrigation facilities, including stops at one of the District's main irrigation canals, the Capay Diversion Dam and Willow Slough Bypass. (SF)

San Joaquin County and Delta Water Quality Coalition (SJCDWQC)

On 31 December 2008, staff received revisions to the SJCDWQC's June 2008 Semi-annual Monitoring Report in response to staff's 22 December comments. On 12 January, staff received a revision to the Coalition's August 2008 MRP Plan, which modified the Plan by exchanging a monitoring site for another, more representative monitoring site. On 23 January, the revised 30 September 2008 Management Plan was approved by the Executive Officer. The Management Plan outlines actions that the Coalition will take to address water quality impairments in the Coalition region.

On February 19, staff attended the San Joaquin County Resource Conservation District's monthly Board meeting. Staff answered questions from Board members regarding the use of water quality criteria and trigger limits for identify exceedances, the Long-Term Irrigated Lands Regulatory Program, and the necessity of the Coalition's monitoring of analytes that are not applied by agriculture.

Southern San Joaquin Valley Water Quality Coalition (SSJVWQC)

The SSJVWQC was issued a Notice of Violation on 11 March 2009, for an unacceptable Monitoring and Reporting Program Plan (MRP Plan). The SSJVQC must submit an acceptable management plan by 8 May 2009 or the Executive Officer will issue a Coalition-specific MRP Order. Without an approved MRP Plan, the SSJVWQC is required to continue to operate under Monitoring and Reporting Program Order No.R5-2005-0833.

Westlands Stormwater Coalition

On 6 November, Pleasant Valley Water District inquired whether the Central Valley Water Board would require additional monitoring sites to monitor discharges from Pleasant Valley irrigated lands, should Pleasant Valley Water District merge with Westlands Stormwater Coalition. On 18 December, staff sent a letter to Pleasant Valley Water District allowing the current monitoring site to fulfill monitoring requirements under the stipulation that if exceedances are detected, additional monitoring sites may be required.

Staff reviewed USGS Report 02-4286 in response to the Westlands Coalition's request to waive a management plan requirement for electrical conductivity on Panoche-Silver Creek. A response to the request is currently being prepared.

On 25 March, the Executive Officer conditionally approved the Westlands Stormwater Coalition Monitoring and Reporting Program Plan. Westlands is a unique coalition monitoring three ephemeral streams that may remain dry for multiple years until sufficient rainfall in the upper watersheds produce stormwater runoff. The Westlands Water District has an enforceable policy that does not allow their growers to discharge tail water. The MRP Plan is designed to ensure the collection of as much data as possible during the highly transient periods of stream flow. The Annual Monitoring Report for the 2007- 2008 storm season is currently under staff review.

Westside San Joaquin River Watershed Coalition (WSJRW)

On 31 January, the WSJRW submitted a draft management practice report describing the interim performance goals they will use to evaluate management practice implementation and effectiveness in the high priority watersheds, Hospital and Ingram Creek watersheds, identified in the approved Management Plan. On 5 and 12 February staff met with the WSJRW to discuss comments on the report. The WSJRW submitted the draft final for staff review on 19 February. t

Data Management

In March, staff updated the ILRP Participant Monitoring Data website with monitoring data through March 2008 for the California Rice Commission and the Westlands Storm Water Coalition. Future updates are planned to include the 2008 Coalition monitoring data and thereafter data submitted by the Irrigation Districts this spring.

A meeting between the Southern San Joaquin Valley Water Quality Coalition and the SWAMP Quality Assurance (QA) Team from the State Water Board previously scheduled for 29 January 2009 was postponed. This meeting was scheduled at the Coalition's request and is to discuss and develop Coalition tools to achieve SWAMP comparable data as well as assist in laboratory performance issues. The SWAMP QA Team is funded by Proposition 50, and cannot be utilized until the State budget details have been determined. Rescheduling will take place as soon as the Proposition 50 funds are released.

Staff continues to work closely with stakeholders and the SWAMP program to maintain the flow of information and consistency with the SWAMP 2.5 comparability goals.

Individual Dischargers

Turlock Irrigation District (Turlock ID)

On 5 January, Water Board staff met with Turlock ID to discuss and clarify Management Plan requirements. As a result of the meeting, Turlock ID will be submitting a Management Plan on 1 June to address EC, TDS, and diuron exceedances.

Modesto Irrigation District (Modesto ID)

On 23 February, Modesto ID submitted its annual monitoring report. Staff will be reviewing and preparing a response letter shortly.

Grant Management

Proposition 84

Staff continued to work with the grant applicant, the Coalition for Urban/Rural Environmental Stewardship (CURES), on a grant agreement with a scope of work that will meet the Prop 84 and Division of Financial Assistance (DFA) requirements. Grant funding is still suspended due to the State budget issues, but a grant agreement should be ready for approval and execution when the suspension is lifted.

MOU Pilot Program

On 28 January, staff met with the Butte and Glenn County Agricultural Commissioners in Sacramento to discuss the next steps for the MOU Pilot Program and role of agricultural commissioners in a long-term ILRP. In March, staff submitted a progress report on the pilot program to the State Water Board summarizing the accomplishments of the program and requesting funding for next fiscal year.

APPENDIX 3

Current Board Member Directives Checklist as of 6/9/2009

Board Meeting	Staff	Requested by Board member	Issue	Due Date	Direction	Current Status
9/16/2003	Rik Rasmussen	WQO 2003-12	Toxicity Revisions to the SIP	Release draft revisions - January 2009. Adoption - Spring 2009.	Modiy the SIP to include policy direction on the use of the numeric chronic toxicity effluent limits in NPDES permits for POTWs that discharge to inland waters.	Staff is currently working to revise the toxicity control provisions in the SIP. Proposal changes include 1) clarifying the appropriateness of numeric toxicity effluent limits in NPDES permits and 2) expanding and standardizing implementation requirements for toxicity control. Staff is working with USEPA on developing options for determining highly defensible statistical methods for the analysis of toxicity testing data. Staff are working with USEPA to verify possible statistical methods for determining compliance with permit toxicity limits. Results of this project will lead to defensible options for toxicity control. USEPA has funded a contract with SAIC for an economic analysis of the proposed changes.
11/15/2006 (during Klamath River TMDL proceedings)	Steven Herrera, Karen Niiya, Eric Oppenheimer	All	Inclusion of the Klamath River watershed in the policy being developed pursuant to AB 2121	late 2009	Upon adoption of the policy for the five counties described in Water Code section 1259.4, the Board should consider the expansion or amendment of AB 2121 policy to include the Klamath River and its tributaries.	The Division of Water Rights has developed a draft policy for protection of instream flows in five coastal counties described in Water Code section 1259.4 as added by AB 2121. Upon adoption of this policy, the Board may consider amending the policy or developing a policy specific for the Klamath River and its tributaries. The policy for the Klamath River and its tributaries should include all limitations and mitigations developed as part of any 303(d) listing and TMDL requirements. The Division recomends that the Board wait until it has adopted the policy for the five coastal counties before expanding instreamflow protections policies elsewhere in California.
2/19/2008	Shakoora Azimi-Gaylon	Resolution No. 2008-0014	Plan for Enclosed Bays/ Estuaries- Part 1 Sediment Quality	Feb-09	Directs staff to initiate appropriate proceedings to amend the section 303(d) listing policy by February 2009.	In progress. Expected Board consideration February, 2009
4/15/2008	Wetland Policy Development Team	All	Regional Policy Progress Updates	Summer 09	State Board has directed in the Board Wetland Policy resolution (April 15, 2008) that the Wetland Policy Development Team report back to the Board following the peer review of Region 1 & 2's Stream and Wetlands System Protection Policy and also within the public comment period prior to Regional Board adoption.	The peer review process has been delayed.
6/1/2008	Executive	Frances Spivy-Weber	Aerial Deposition		Executive staff and Board lead will coordinate with ARB to evaluate joint solutions to aerial deposition that impacts water quality.	

APPENDIX 3

Current Board Member Directives Checklist as of 6/9/2009

Board Meeting	Staff	Requested by Board member	Issue	Due Date	Direction	Current Status
9/2/2008	Jon Bishop	All	Recycled Water Policy	Nov-08	Bring suggested staff changes to stakeholder draft recycled water policy back to the Board.	Completed.
9/16/2008	Barbara Evoy	All	SRF Loans	Mar-09	Bring to the Board for consideration options on how to address 218 vote. One option must include no new SRF loans until the issue is resolved.	In progress.
10/7/2008	Miles Burnett	Gary Wolff	Development of Environmental User Fees	May-09	Such a fee was adopted for NPDES permittees. Similar fees should be developed for other permit types.	Alternative fee strategies are being developed.
11/4/2008	DWQ	Frances Spivy-Weber	Beaches	Jul-09	Include the use of rapid indicators in discussions on long term funding for beach monitoring.	
11/18/2008	DFA	All	SRF Loans	Jul-09	Work with CASA and Tri-TAC to develop alternatives to explore safety fund for the SRF to protect against rate rollbacks.	In progress.
1/6/2009	Liz Haven	All	Suction Dredge	Jul-09	Work with DFG to define scope of work for suction dredge EIR. Brief Board members on process and contents.	Update on status in February and April Executive Director's Report.
2/17/2009	DWQ	All	Blue Green Algae	Apr-09	Report back to the Board on Blue Green Algae work being conducted on the Klamath.	
2/17/2009	DWQ	All	LID	Jul-09	Staff will follow up with the Coastal Commission and DWR IRWM on outreach for LID education for the Municipalities and report back in a future ED report.	
2/17/2009	Darrin Polhemus	Charles Hoppin	Monitoring	Jan-10	Report back from time to time in the ED report on work with the shipping industry regarding monitoring requirements.	

PROGRESS REPORT

Progress on the Development of a Final Agreement for the Klamath Hydroelectric Project and Implementation Status of Interim Measures

June 16, 2009

The purpose of this progress report is to update the State Water Resources Control Board, stakeholders, and interested parties on the status of settlement discussions, progress on the development of a final settlement agreement and progress on pertinent legislation relating to the Klamath Hydroelectric Project (FERC Project No. 2082). This progress report also provides an update on the status of interim measures contained in the Agreement in Principle and Interim Conservation Plan for which implementation has already begun.

Introduction

On November 13, 2008, the United States Department of Interior, the States of California and Oregon, and PacifiCorp executed an Agreement in Principle (AIP) describing the framework for an approach to possible removal of four dams on the Klamath River associated with PacifiCorp's Klamath Hydroelectric Project (Project). Since that time, parties in support of the AIP have been actively engaged in developing the Final Agreement consistent with the AIP. The Final Agreement will be a binding agreement among the parties pertaining to more completely carry out the AIP.

The AIP provides for, and the Final Agreement will contain, measures which will be implemented before dam removal to protect and improve water quality and fisheries in the Klamath River (referred to as AIP Interim Measures). It is anticipated that the AIP Interim Measures, as described in the AIP and more fully detailed in the Final Agreement, will support a comprehensive approach to addressing water quality and fisheries issues in the Klamath basin. It is the intent of the parties that these AIP Interim Measures will ensure compliance with all laws applicable to the Project, including without limitation load allocations that may be assigned to the Project through the Klamath River Total Maximum Daily Load (TMDL) process and other requirements of the Clean Water Act, the Endangered Species Act (ESA), and other applicable regulations, until the time of dam removal.

Also, in November 2008, PacifiCorp completed development of an Interim Conservation Plan (ICP) in consultation with the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS), (together, the Services). The ICP identifies interim conservation measures or actions that PacifiCorp is implementing or plans to implement at the Project related to fisheries and water quality protection or enhancement (referred to as ICP Interim Measures). PacifiCorp developed the ICP in consultation with the Services to address the Services' concerns about potential effects of Project operations on listed Coho salmon and sucker species that could occur during the interim period, prior

to reestablishment of fish passage in or through the Project area. On November 12, 2008, the Services confirmed receipt of the ICP, and in doing so, noted that the ICP contains an important set of measures, which if fully implemented will reduce and help minimize the effects of interim Project operations on listed Coho salmon and sucker species (NMFS and FWS 2008).

Some of the AIP Interim Measures and ICP Interim Measures are now being implemented, others will be implemented upon execution of the Final Agreement, and other measures will go into effect upon a determination by the Secretary of the Interior in favor of dam removal.

Current Status of the Settlement Process and Final Agreement

The parties to the AIP - the States of California and Oregon, the United States, and PacifiCorp - have been working diligently with an expanded settlement group including the Klamath, Karuk, and Yurok tribes, representatives of environmental organizations, fisherman's organizations, and the irrigation community to develop a Final agreement within the framework of the AIP. These negotiations are inherently complicated, but the change in federal administration has made the negotiations even more difficult because key appointments within the Department of Interior have only recently been confirmed.

Nevertheless, significant progress towards a Final Agreement has been made in the past few months, during which time the parties have met many times to work through the complex issues to be addressed in the Final Agreement. All parties are hopeful that all remaining issues will be resolved soon now that the new federal leadership is in place and can engage in and resolve the remaining policy issues in the Final Agreement.

Current Status of the Pertinent Legislative Process

Oregon Governor Ted Kulongoski and the settlement parties have supported passage of Senate Bill 76, which would establish a \$200 million fund, paid for by PacifiCorp's Oregon and California customers, to cover the cost of removal of the Klamath Dams. The bill enables the Oregon Public Utility Commission to allow PacifiCorp to begin collecting these funds through a customer surcharge over the next ten years (which amounts to an average of \$1.50 per month from residential customers). Senate Bill 76 passed in the Senate on February 17 and was passed by the House on June 12. The Senate and House versions of the bill will be reconciled and sent to Governor Kulongoski, who is expected to sign the bill into law. Throughout the Oregon session, Governor Kulongoski's staff, PacifiCorp, and other settlement parties have worked to address concerns raised by stakeholders and lawmakers regarding potential liability to Oregon taxpayers, and the resulting amendments incorporated in the House version of the bill have strengthened the customer protections in the legislation.

Current Status of the CEQA/401 Process

On February 17, 2009, a diverse group of parties to the AIP, including the federal government and the States, several tribes and non-government organizations, and PacifiCorp made a presentation to the State Water Resources Control Board (SWRCB) on

the status of settlement negotiations. These parties also requested that the SWRCB hold the California Environmental Quality Act (CEQA) process for the California Section 401 water quality certification in abeyance to allow the parties to focus resources and attention on the Final Agreement. On February 21, 2009, SWRCB Executive Director Dorothy Rice responded to this request. In her response, Ms. Rice informed the parties that the SWRCB will accept comments on the SWRCB's CEQA Notice of Preparation (NOP) after the time specified in the NOP. At the same time, Ms. Rice advised the parties that the CEQA process would continue and that the SWRCB would evaluate options to fund the CEQA review process. On May 7, 2009, the SWRCB and PacifiCorp entered into an amendment to their existing CEQA Memorandum of Understanding (MOU) to provide up to \$200,000 to the CEQA consultant to continue CEQA work until execution of the Final Agreement. On May 27, 2009 PacifiCorp issued a task order to the consultant to commence that work.

In addition, on May 6, 2009 PacifiCorp presented to the North Coast Regional Water Quality Control Board its 2009 Plan for Water Quality Management Actions for Copco and Iron Gate Reservoirs. (See attached). This Plan describes a host of studies and measures that PacifiCorp plans to implement within the Project area in 2009 to improve water quality and to inform management decisions at the reservoirs. PacifiCorp is working with the North Coast Regional Water Quality Control Board and parties to the AIP and the Final Agreement to integrate the measures identified in this Plan into the Final Agreement.

Current Status of AIP Interim Measures and ICP Interim Measures Implementation

The summaries below include descriptions of the AIP Interim Measures and ICP Interim Measures for which implementation has already begun pursuant to commitments in the AIP and/or ICP.

J.C. Boyle Reservoir Water Quality (AIP Interim Measure 5)

This measure provides that, upon signing a Final Agreement, PacifiCorp will study measures to improve water quality in J.C. Boyle reservoir, such as aeration or mixing to improve DO within the reservoir, or other measures such as wetlands development. Implementation of feasible enhancement measures would begin following the Federal Determination¹ as described in the AIP.

Activities conducted on this measure include:

- A feasibility assessment of an aeration or mixing system in J.C. Boyle reservoir is now near completion. The results of the assessment are being documented in a technical report to be issued in later summer 2009.
- Three other study and planning efforts are being conducted in 2009 that are pertinent to J.C. Boyle reservoir water quality, including:

¹ The Federal Determination means the determination by the United States whether the benefits of Project facilities removal justify the risks, costs, and liabilities associated with facilities removal. The Federal Determination will be made no later than March 31, 2012.

- Basin Water Quality Credit Trading Process
- Constructed Treatment Wetland Pilot Study
- Constructed Treatment Wetland Technical Meetings

These three other activities are being conducted as a part of AIP Interim Measure 11 (Nutrient Reduction Measures) as summarized below. The water quality credit trading and constructed treatment wetland activities are aimed primarily at watershed and inflow management of the large, inflowing loads of nutrients and organic matter to J.C. Boyle reservoir, as well as Copco and Iron Gate reservoirs. These large, inflowing loads are beyond the control of PacifiCorp's Project operations. However, given that water quality conditions in the Project vicinity are largely driven by these large inflowing loads, improvements in watershed and upstream water quality (such as will be expected from implementing TMDLs that are currently being developed by ODEQ) will be essential to achieve water quality improvements in J.C. Boyle reservoir and elsewhere in the Project vicinity.

Coho Enhancement Fund (AIP Interim Measure 9 and ICP Interim Measure II.F)

PacifiCorp will provide \$510,000 annually into the Coho Enhancement fund beginning in 2009, for the term of the interim period. NMFS and California Department of Fish and Game (CDFG) will jointly select projects that comply with applicable agency policies, regulations and planning documents relating to salmonid conservation in the Klamath River Basin (i.e., Magnuson-Stevens Reauthorization Act Klamath River Coho Salmon Recovery Plan, NMFS' impending SONCC Coho Salmon Recovery Plan, and CDFG's Recovery strategy for California Coho salmon). PacifiCorp will evaluate and approve the selected projects to insure consistency with applicable license conditions, project selection criteria established between CDFG, NMFS and, and PacifiCorp, and other regulatory requirements. The original AIP and ICP funding commitment was for \$500, 000. NMFS, CDFG, and PacifiCorp recognized that ICP Measure IID, Gravel Augmentation below Iron Gate, was also a Coho Enhancement measure, and would be better served being part of the Coho Enhancement Fund program. Therefore, NMFS, CDFG, and PacifiCorp mutually agreed to increase the fund to \$510,000 and include gravel augmentation in the criteria of prospective project selection,

Activities conducted on this measure include:

- PacifiCorp, NMFS, and the CDFG have executed a letter agreement setting forth the terms for the use and administration of the Coho Enhancement Fund.
- PacifiCorp, NMFS and CDFG have determined that the National Fish and Wildlife Foundation (NFWF) will serve as the Administering Party for the Coho Enhancement Fund. NFWF was selected based on its depth of experience administering similar funds and their recent determination to include the Lower Klamath Basin in their Fresh Water Fish Conservation Keystone Initiative program. NFWF administration of the Coho Fund also creates the potential for additional NFWF matching funds for enhancement projects while also establishing a comprehensive approach to addressing the needs in the lower Klamath basin.

- PacifiCorp and NFWF have executed a final agreement outlining the terms for NFWF's role as the Administering Party. The Coho Enhancement Fund is expected to be fully funded in June 2009 so that projects will be underway this year.
- NMFS and CDFG have identified and prioritized a list of 2009 potential projects that meet Coho Enhancement Fund objectives and selection criteria. CDFG and NMFS are completing the project scope and completing a description of the benefits to Coho salmon. Potential 2009 projects include channel reconstruction, a fish screen, diversion reconstruction, and rearing habitat improvements. These projects will then be funded through NFWF.

Iron Gate Turbine Venting (AIP Interim Measure 10 and ICP Interim Measure II.A)

This measure provides that PacifiCorp will test turbine venting at Iron Gate dam and, if determined to be a successful and viable tool for improving dissolved oxygen (DO) concentrations downstream of Iron Gate dam, shall implement turbine venting on an ongoing basis.

Activities conducted on this measure include:

- In summer-early fall 2008, turbine venting tests at the Iron Gate powerhouse and DO monitoring downstream of Iron Gate dam were conducted. The tests showed that turbine venting resulted in beneficial increases in DO of up to 2 mg/L and 20 percent saturation while still keeping Total Dissolved Gases (TDG) levels below the EPA criterion of 110 percent.
- During 2009, PacifiCorp will implement turbine venting operations and is also planning to install and test a forced air blower at the Iron Gate powerhouse to introduce additional air into the turbine draft tube. Installation of the system should be completed by August 2008. During this test, DO and TDG monitoring downstream of Iron Gate dam also will be conducted.
- During 2009, PacifiCorp plans to develop a standard operating procedure (SOP) for on-going implementation of turbine venting.
- Turbine venting operations for 2009 began on June 11, 2009 when DO monitoring below the Iron Gate powerhouse indicated that DO levels were below 87 percent saturation.

Nutrient Reduction Measures (AIP Interim Measure 11)

This measure provides for PacifiCorp's implementation under a Final Agreement of nutrient reduction measures to improve water quality within Copco and Iron Gate reservoirs, and to address implementation of the Water Quality Control Plan for the North Coast Region (Basin Plan), including Total Maximum Daily Loads (TMDLs).

The large, inflowing loads of nutrients and organic matter from upstream sources (particularly Upper Klamath Lake) are a principal driver of water quality conditions in the Project reservoirs, the Klamath River between the reservoirs, and downstream of Iron Gate dam. These large loads create eutrophic conditions that include blue-green algae (cyanobacteria) blooms in the reservoirs, and extensive periphyton growth in the

river. Therefore, this measure includes activities that address reductions in nutrients and resultant algae production.

Activities conducted on this measure include:

- In January 2009, a document titled "Draft Recommendations for AIP Interim Measure 11: Nutrient Reduction Measures in the Klamath River" was distributed to settlement parties for technical consideration. The document is currently being revised with a focus on:
 - Water quality improvement accounting and tracking program
 - Partnering with other entities on wetland demonstration projects
 - Potential measures to address water quality in the Project reservoirs
 - Potential projects in the lower basin
- PacifiCorp provided comments on the draft TMDL "Implementation Plan" put forth by the Regional Board.
- PacifiCorp met with the Regional Board, EPA, and ODEQ in May to discuss TMDL Implementation plans, a water quality accounting program for nutrient reduction and potential links with these actions and AIP Measure No. 11.
- A series of pertinent study and planning efforts are being conducted in 2009, including:
 - Basin Water Quality Improvement Accounting and Tracking Program
 - Constructed Treatment Wetland Pilot Study
 - Constructed Treatment Wetland Technical Meetings
 - Potential Testing of High-Energy Circulators in Copco Reservoir
 - Curtain Deployment in Iron Gate Reservoir
 - Mechanical Removal of Algae Biomatter from Copco and Iron Gate Reservoirs
 - Tests of Select Treatments for Algae Control

The water quality credit trading and constructed treatment wetland activities are aimed primarily at watershed and inflow management of the large, inflowing loads of nutrients and organic matter to Project reservoirs. These large, inflowing loads are beyond the control of PacifiCorp's Project operations. However, given that water quality conditions in the Project vicinity are mainly driven by these large inflowing loads, improvements in watershed and upstream water quality (such as will be expected from implementing TMDLs that are currently being developed by ODEQ) will be essential to achieve water quality improvements in the Project reservoirs, the Klamath River between the reservoirs, and downstream of Iron Gate dam.

Water Quality Monitoring (AIP Interim Measure 12)

This measure provides that PacifiCorp will fund a water quality monitoring program, including on-going monitoring of cyanobacteria (blue-green algae) and associated toxin. Funding of \$500,000 per year will be provided for this monitoring.

Activities conducted on this measure include:

- A draft water quality monitoring plan was developed in December 2008 and was shared widely among diverse stakeholders including basin Tribes, the U.S. Environmental Protection Agency, the Oregon Department of Environmental Quality, the North Coast Regional Water Quality Control Board.
- Through a collaborative process, federal, state, tribal, and other entities have produced – within a short time frame – a robust and useful plan that will contribute to further understanding of Klamath basin water quality issues and public health monitoring. The Regional Board is currently finalizing the monitoring plan, which should be released shortly.
- The Basic Water Quality Monitoring component includes 24 sampling locations from Link River dam to the Klamath River estuary. Parameters to be measured include temperature, DO, pH, conductivity, phytoplankton, and a suite of nutrients. This sampling began this May and will continue through the remainder of the year.
- The Public Health Monitoring component of the monitoring program began in June and includes 13 public access locations in Copco and Iron Gate reservoirs and the Klamath River for both microcystis and microcystin. Sampling will occur weekly during the peak of the bloom season from June through October (depending on location). In addition, fish tissue samples will be collected in both reservoirs during the peak bloom conditions and mussel samples will be collected below Iron Gate dam during 4 sampling events at 6 Klamath River locations.
- Sampling entities that will implement the 2009 water quality monitoring plan include the Yurok and Karuk tribes, PacifiCorp, and the Bureau of Reclamation.

Hatchery Genetics Management Plan (AIP Interim Measure 16 and ICP Interim Measure II.C)

Under this measure, PacifiCorp will fund the development and implementation of a Hatchery Genetics Management Plan for the Iron Gate Hatchery. CDFG, NMFS, and PacifiCorp have held multiple work sessions (calls and meetings) to establish a common understanding of the HGMP process as it applies to the Iron Gate Hatchery.

Hatchery: 25 Percent Fractional Marking (AIP Interim Measure 17)

Under this measure, PacifiCorp will fund 25 percent fractional marking at Iron Gate Hatchery facilities. Funding will include purchase of necessary equipment (e.g., automatic fish marking trailer and tags) as well as personnel costs. For 2009, CDFG and PacifiCorp have worked cooperatively to make necessary infrastructure improvements to Iron Gate Hatchery to allow 25 percent fractional marking to proceed. Marking activities were completed in early June using an automated marking trailer made available by CDFG. As part of this measure, PacifiCorp will purchase a marking trailer

to continue the fractional marking program when equipment from CDFG is no longer available in 2011.

Fish Disease Relationship and Control Studies (AIP Interim Measure 20 and ICP Interim Measure II.B)

Under this measure, PacifiCorp will fund the study of fish disease relationships downstream of Iron Gate dam (estimated at \$500,000 total cost). Research will be performed by an entity agreed upon by the Parties, and will include recommendations for control measures as appropriate.

Activities conducted on this measure include:

- PacifiCorp has executed an agreement with the National Fish and Wildlife Foundation to set forth its role as the Administering Party for the fish disease relationship and control study funding.
- A letter agreement has been executed between NMFS and PacifiCorp to govern distribution of funds for studies covering study selection guidelines, reporting, etc.
- NMFS and PacifiCorp met with members of the Klamath Fish Disease Work Group in March 2009. A request for research proposals was released by PacifiCorp and NMFS on June 15. Research proposals are due on July 10 and it is expected that study funding will occur this summer following evaluation of the research proposals submitted.

Water Quality Technical Conference (AIP Interim Measure 22)

This measure provides that PacifiCorp will fund a basin-wide technical conference on water quality. The intent of this measure is to improve understanding of basin-wide water quality impairment and explore solutions to improve water quality through technical, regulatory, or other means.

Activities conducted on this measure include:

- In a document dated January 16, 2009, the parties provided a draft plan with recommendations for planning and scheduling the conference intended to focus on Nutrient Enrichment and Nutrient Reduction Strategies.
- A committee established by the signatories to the Final Agreement will use the \$100,000 provided by PacifiCorp to convene a group of scientists and technical experts to inform them on the development of future monitoring plans and nutrient management strategies.

Eastside/Westside Seasonal Restrictions (ICP Interim Measure I.A)

Under this measure, PacifiCorp will not operate turbines at the East Side/West Side facilities from July 15 to November 15 each year to avoid entrainment mortality of sucker species residing above these facilities. In developing the proposed action, the Services and PacifiCorp recognized that the majority of potential sucker entrainment occurs at the East Side/West Side facilities during the period from July 15 to November

15 (FWS 2007). Ceasing East Side/West Side operations from July 15 to November 15 will eliminate any potential for entrainment-related mortality during this key period.

Activities conducted on this measure include:

- PacifiCorp has been operating the East and West Side facilities within the terms of this Agreement.

Sucker Enhancement Fund (ICP Interim Measure I.B)

Under this measure, PacifiCorp will make annual payments (based on a yearly cost formulation as stipulated in the ICP) into the Sucker Enhancement Fund to be used exclusively to fund project designed to enhance the survival and recovery of listed suckers, including, but not limited to, habitat restoration and acquisition. The fund will be administered in consultation with USFWS and Oregon Wild.

Activities conducted on this measure include:

- Approximately \$68,000 has been made available to date under the Sucker Enhancement Fund. Oregon Wild is administering this fund and is currently soliciting project proposals, with selection anticipated in September 2009.

Flows Below Link River Dam (ICP Interim Measure I.C)

Under this measure, PacifiCorp will implement a protocol to reduce potential stranding of suckers below Link River dam during low flow periods. Specifically, during periods of operation of the East Side/West Side facilities, if flow in the Link River between Link River dam and the East Side and West Side powerhouse returns is anticipated to be less than 300 cfs as a result of operational conditions within PacifiCorp's control (and not outside its control due to Bureau of Reclamation operations), PacifiCorp will promptly notify FWS after becoming aware of such a condition, and meet and confer with the Reclamation and the FWS to (1) evaluate potential for impacts to listed fish in that reach, and (2) agree upon implementation of feasible measures (that may include salvage or increased flows) intended to minimize impacts to listed suckers in that reach. By conferring with the FWS, and cooperatively implementing feasible measures when this situation arises due to operational conditions within PacifiCorp's control, potential stranding of suckers in the Link River will be reduced.

Activities conducted on this measure include:

- PacifiCorp, USFWS, and Bureau of Reclamation met in the spring of 2009 to begin establishing a protocol for coordinating flow related actions between the parties. The parties continue to develop a better understanding of operational elements that create flow changes which is being incorporated into the protocol. The protocol will emphasize the need for regular communication on operational issues to best avoid potential impacts to the species. A written coordination protocol is anticipated by fall of 2009.

Contacts

Questions or comments regarding this progress report can be directed to the following individuals:

Tim Hemstreet
Project Manager
PacifiCorp
825 NE Multnomah, Suite 1500
Portland, OR 97232
(503) 813-6170

Richard Roos-Collins
Attorney
American Rivers and California Trout
Natural Heritage Institute
100 Pine Street, Suite 1550
San Francisco, CA 94111
(415) 693-3000 ext. 103

2009 PLAN FOR WATER QUALITY MANAGEMENT ACTIONS FOR COPCO AND IRON GATE RESERVOIRS (VERSION: APRIL 30, 2009)

INTRODUCTION

This *2009 Plan for Water Quality Management Actions for Copco and Iron Gate Reservoirs* (2009 Plan) describes several actions PacifiCorp is implementing during 2009 for improving water quality in Copco and Iron Gate reservoirs. This 2009 Plan specifically describes the purposes and objectives of the 2009 actions, the tasks and work activities associated with each of the actions, and the anticipated schedule for completing the actions.

As a result of large upstream organic and nutrient loads, Copco and Iron Gate reservoirs experience high primary production, including cyanobacteria (blue-green algae) blooms, primarily during the summer. The intent of this 2009 Plan is to implement actions that will improve water quality conditions related to the primary production, respiration, and decay processes within the reservoirs (and attendant effects on summertime algae blooms, dissolved oxygen and pH conditions). The implemented actions, when combined with implementation of potential actions by others to control and reduce nutrient loads upstream of the Project, are expected to provide substantial and sustained water quality improvements in and below Copco and Iron Gate reservoirs.

Relationship of the 2009 Plan to Agreement in Principle Interim Measures

On November 13, 2008, the United States, the States of California and Oregon, and PacifiCorp executed an Agreement in Principle (AIP) describing the framework for an approach to possible dam removal on the Klamath River. Interim Measure 11 of the AIP, titled *Nutrient Reduction Measures*, provides for PacifiCorp's implementation under a final settlement agreement of nutrient reduction measures to improve water quality within Copco and Iron Gate reservoirs, and to address implementation of the *Water Quality Control Plan for the North Coast Region* (Basin Plan), including Total Maximum Daily Loads (TMDLs). Under the AIP, PacifiCorp has agreed to begin, in advance of a final agreement, implementation of a water quality monitoring and planning program in support of Interim Measure 11.

Interim Measure 10 of the AIP, titled *Iron Gate Turbine Venting*, provides that PacifiCorp will test turbine venting at Iron Gate dam and, if determined to be a successful and viable tool for improving dissolved oxygen (DO) concentrations downstream of Iron Gate dam, shall implement turbine venting on an ongoing basis. This 2009 Plan includes a description of actions related to turbine venting at Iron Gate being implemented in 2009.

The AIP includes three other water quality-related interim measures. Interim Measure 5, titled *J.C. Boyle Reservoir Water Quality*, provides that, upon signing a final agreement, PacifiCorp will study measures to improve water quality in J.C. Boyle reservoir, such as aeration or mixing to improve DO within the reservoir, or other measures such as wetlands development. Implementation of feasible enhancement measures would begin following the Federal determination described in the AIP. Interim Measure 12, titled *Water Quality Monitoring*,

provides that PacifiCorp will fund a water quality monitoring program, including on-going monitoring of cyanobacteria (blue-green algae) and associated toxin. Interim Measure 22, titled *Water Quality Technical Conference*, provides that PacifiCorp will fund a basin-wide technical conference on water quality. While still under development, the intent of this measure is to improve understanding of basin-wide water quality impairment and explore solutions to improve water quality through technical, regulatory, or other means. Interim Measures 5, 12, and 22 are, or will be, addressed in other separate plans, and are not included as specific actions in this 2009 Plan.

Relationship of the 2009 Plan to Previous Reservoir Management Plans

PacifiCorp previously prepared and implemented Reservoir Management Plans (RMPs) in 2007 and 2008 to evaluate the effectiveness and feasibility of various technologies and measures to more effectively control water quality conditions in Copco and Iron Gate reservoirs. The technologies and measures assessed in the RMPs focused on improving water quality conditions in the reservoirs that result from significant loads of organic and nutrient matter originating from upstream of the Project (PacifiCorp 2007, PacifiCorp 2008). In effect, this 2009 Plan serves as a revised RMP similar to those developed in 2007 and 2008. As with the previous RMPs, the 2009 Plan continues the evaluation and implementation of various technologies and measures to improve water quality conditions in Copco and Iron Gate reservoirs, particularly those conditions that result from significant loads of organic and nutrient matter from upstream sources.

These 2009 activities supplement previous studies regarding reservoir management activities, including wetland treatment, in-reservoir oxygenation, reoperation (selective withdrawal and storage management), surface mixing, limnological investigation, and other studies. The efficacy of these activities and actions has been variable, wherein beneficial effects range from substantial to minimal. Studies to date have not examined the synergistic effect of multiple prescriptions in addressing water quality conditions in the reservoirs. As such, PacifiCorp believes that retaining the findings from all these actions is important in considering future reservoir management approaches.

WATERSHED OR RESERVOIR INFLOW MANAGEMENT ACTIVITIES DURING 2009

Watershed and inflow water quality management is unaffected by and beyond the control of PacifiCorp's Project operations. However, given that water quality conditions in Copco and Iron Gate reservoirs are largely driven by the large nutrient and organic loads from upstream sources (particularly Upper Klamath Lake), improvements in watershed and upstream water quality will be essential to appreciable sustained water quality improvements in Copco and Iron Gate reservoirs and riverine reaches downstream of Upper Klamath Lake.

This section describes activities for watershed and inflow water quality management activities during 2009, including the justification and objective for the activity, and the specific tasks and schedules that PacifiCorp is implementing to conduct the activities.

Concepts and Approaches for Basin-Wide Water Quality Credit Trading

Purpose and Objective

The *Water Quality Restoration Plan for the Klamath River Basin in California: Draft Scoping for TMDL Implementation* (Regional Water Board 2009a) considers a variety of implementation options to address water quality impairments in the Klamath River, including the opportunity for “water quality credit trading” in the Klamath Basin. Water quality credit trading is based on the concept that sources of pollutants in a watershed can face very different efficiencies and costs to control the same pollutant. Trading programs allow facilities facing lower efficiencies and higher pollutant reduction costs to achieve water quality improvements by purchasing environmentally equivalent (or superior) pollutant reductions from another source, thus achieving the same or greater overall water quality improvement with greater efficiency.

Water quality credit trading in the Klamath Basin could provide downstream users such as PacifiCorp an efficient option for helping to reduce nutrient loads from upstream to offset water quality impairments in the Klamath River.

Tasks and Work Elements

The tasks and work elements associated with this activity in 2009 will include the following:

- Identify water quality constituents amendable to trading
- Identify potential traders and other stakeholders
- Explore potential constituent control approaches, credit calculation methodology, and range of unit credit costs

The above tasks are intended to define the framework for a potential program and allow all parties to assess elements of water quality credit trading in the Klamath Basin. Should program activities be developed further, future tasks and work elements would include:

- Define Klamath Basin specific constituent control approaches, credit calculation methodology, and range of unit credit costs
- Identify trading program barriers and develop solutions
- Plan for stakeholder information and input
- Develop candidate market structures
- Describe preferred program structure
- Prepare trading program implementation plan and cost estimates

PacifiCorp has engaged Regional Water Board staff on scoping discussions and prepared two preliminary deliverables for this action, including (1) an outline of a technical study and program development plan, and (2) an outline of a stakeholder information and participation plan. These documents are intended to assist the Regional Water Board and Oregon

Department of Environmental Quality (DEQ) in drafting appropriate language for upcoming TMDL documents.

Schedule

Outlines for: (1) a technical study and program development plan; and (2) a stakeholder information and participation plan	June 2009
Program Development and Technical Study Plan	September 2009
Develop Stakeholder Information and Participation Plan	September 2009
Implement Stakeholder Information and Participation Plan	December 2009
Technical Studies: Methodology and Feasibility	March 2010

Constructed Treatment Wetland Technical Meetings

Purpose and Objective

Constructed treatment wetlands have been identified as potentially viable means of improving water quality conditions in the upper Klamath River (Rabe et al. 2008, Lyon et al. 2008, Deas and Vaughn 2006). Target water quality improvements include reduced total suspended solids and organic matter (biochemical oxygen demand). These studies, as well as related work around Upper Klamath Lake (e.g., Aldous et al. 2007, Duff et al. 2009, Carpenter et al. 2009), suggest that nutrient removal through treatment wetlands is modest, but may provide additional benefit at the overall watershed level.

The purpose of this task is to conduct a series of technical meetings with regulatory agencies and specific stakeholders to discuss lessons learned from feasibility studies of constructed treatment wetlands in the Project area and at Keno Reservoir. These meetings also are intended to clarify how wetlands treatment may be relevant to PacifiCorp's obligations under a final settlement agreement or in other contexts.

Tasks and Work Elements

The tasks and work elements associated with this activity in 2009 will include the following:

- Identify elements of constructed treatment wetlands that relate to PacifiCorp's obligations under a final settlement agreement or in other contexts.
- Meet with identified agencies and entities to share information on constructed wetlands treatment, PacifiCorp's activities in wetlands treatment studies, and the role PacifiCorp may potentially play in constructed wetland treatment activities related to water quality improvement.

- Produce a technical memorandum summarizing meetings with agencies and entities and associated planning activities and any identified actions. Include time frames for any actions as appropriate. There may be cross-over with other items identified in this plan.

Schedule

Identify wetland elements associated with PacifiCorp's obligations under a final settlement agreement or in other contexts	August 1, 2009
Schedule and attend meetings with agencies and entities	August-November 2009
Technical memorandum	January 31, 2010

Constructed Treatment Wetland Pilot Program

Purpose and Objective

PacifiCorp is considering a constructed treatment wetland pilot project to improve understanding and assist in development of large-scale constructed treatment wetlands. An opportunity may exist to work cooperatively with the U.S. Bureau of Reclamation (Reclamation) to initiate a pre-designed pilot wetland adjacent to Keno Reservoir near Klamath Falls. Reclamation has funded the construction portion of a pilot project (Proposal No. 08SF200023: \$484,707), and there is the possibility that PacifiCorp, under AIP Interim Measure 11 (*Nutrient Reduction Measures*), could cooperatively support the pilot project through funding a property purchase or other means.

Tasks and Work Elements

The tasks and work elements associated with this activity in 2009 will include the following:

- Prepare a package of information on potential partnership with Reclamation on a constructed treatment wetland pilot project. The package would include information on project roles and responsibilities (i.e., including for Reclamation, PacifiCorp, and consultants Rabe Consulting, Geoengineers, and Watercourse Engineering), work activities, and likely planning for pilot project construction in 2010.
- Identify potential land acquisition options and transfer to third party options. Assess costs of potential land acquisition options and transfer. This information would guide PacifiCorp decision-making regarding PacifiCorp's role in the project.
- Prepare a summary identifying how PacifiCorp's participation in the constructed treatment wetland pilot project would fit into PacifiCorp's AIP responsibilities.

- Conduct follow-up activities as appropriate that are indentified in the planning steps as described above.

Schedule

Initial Package	June 2009
Conference Call	June-July 2009
Summary	July-August 2009
Follow-up	July or after, 2009

IN-RESERVOIR WATER QUALITY MANAGEMENT ACTIVITIES DURING 2009

This section describes activities for water quality management in Copco and Iron Gate reservoirs during 2009, including the justification and objective for the activity, and the specific tasks and schedules that PacifiCorp is implementing to conduct the activities.

Curtain Installation in Iron Gate Reservoir in the Vicinity of the Dam Intake

Purpose and Objective

This activity involves the continued evaluation of a floating barrier curtain that was installed in 2008 along the log boom in Iron Gate reservoir in the vicinity of the dam intake. The curtain is a Layfield Type 1 Turbidity Curtain synthetic fabric material¹ suspended to a depth of 10 feet that extends across the entire width of the reservoir (approximately 1100 feet) at the current log boom location, which is about 1800 feet upstream of the dam.

The primary objective of the barrier curtain is to enhance water quality in the vicinity of the dam intake by excluding or reducing the potential entrainment of biomass from blooms of cyanobacteria (blue-green algae) such as *Microcystis* and potential associated algal toxins (i.e., microcystin). The curtain is intended to provide a barrier to drift and accumulation near the dam (and power intakes) of algae biomass in the reservoir's photic zone, especially buoyant algae bloom material at the water surface.

Tasks and Work Elements

The tasks and work elements associated with continued evaluation of a barrier curtain in Iron Gate reservoir in the vicinity of the dam intake will include the following:

- Water quality will be monitored within and outside of curtained areas in the lower part of the Iron Gate reservoir near the dam intake and downstream of the powerhouse discharge to assess the effect of the curtain on water quality. The details of this monitoring (e.g., parameters to be measured, frequency of sampling, etc.) will be described in a water quality monitoring sampling plan (PacifiCorp *in preparation*).

¹ Specifications for the Layfield Type 1 Turbidity Curtain synthetic fabric are available at <http://www.layfieldgroup.com/splash.cfm>.

- Movement of water currents in the vicinity of the curtain will be measured using an Acoustic Doppler Current Profiler (ADCP). The ADCP data will be used to characterize vertical velocity profiles adjacent to and around the curtain. The data will be used in concert with modeling (described below) to assess the effectiveness of the curtain in confining movement of algae biomass or bloom material, and to determine the need for potential adjustments to the curtain to enhance effectiveness (e.g., deepening the curtain).
- Modeling will be conducted using the CE-QUAL-W2 water quality model of the reservoir developed by Watercourse Engineering (the model that has been modified by the Regional Water Board and EPA for development of the TMDL) to assess curtain effects on water quality under varying conditions. These conditions will include potential variations in water column temperature gradients (and hence water column density and stability), and potential variations in buoyancy, settling, or vertical migration rates of cyanobacteria species, particularly *Microcystis*. The modeling information will be used along with monitoring data to determine the need for potential adjustments to the curtain to enhance effectiveness.
- A technical memorandum will be prepared to present findings and recommendations. The conclusions and recommendations of the memorandum will serve as a guide for potential future adjustments to and continued use of this technique.

Schedule

Monitoring of curtain	May-October 2009
ADCP profiling and CE-QUAL modeling	July-September 2009
Technical memorandum	December 2009

Turbine Venting System for Dissolved Oxygen Enhancement at Iron Gate

Purpose and Objective

Daily mean DO conditions are at or near saturation throughout the Klamath River downstream of Iron Gate dam due to the many rapids and riffles in the river that provide mechanical reaeration (PacifiCorp 2008). An exception is the reach immediately below Iron Gate dam during late summer and fall periods, where the relatively deep reservoir intake withdraws water from Iron Gate reservoir that can result in discharges from the powerhouse of water with low DO concentration.

During summer 2008, PacifiCorp completed turbine venting tests at the Iron Gate powerhouse that showed a positive improvement in DO concentration measured in the Klamath River below Iron Gate powerhouse. DO increased by up to about 2 mg/L and 20 percent saturation as a result of full air admission through the existing turbine vent valve design at turbine flows of 1,000 cfs to 1,500 cfs. In addition, measurements indicated that turbine venting produces a negligible increase in Total Dissolved Gas (TDG) in turbine discharges to the river.

During 2009, PacifiCorp plans to install a forced-air blower on an existing, but previously closed, air introduction manifold to increase air entrainment in the turbine draft tube. The installation of the blower is expected to increase air entrainment into the turbine draft tube and further enhance DO concentration below the Iron Gate powerhouse. This new system will be installed and tested in 2009 and turbine venting will be initiated when DO levels are observed to fall below 87 percent saturation in the Klamath River immediately below Iron Gate powerhouse. PacifiCorp will conduct additional testing and evaluation of this turbine venting system at Iron Gate by this year, and will include development of a Standard Operating Procedure (SOP) for this action. Implementing turbine venting at 87 percent saturation will ensure that available means to provide enhanced DO levels are in operation when the level approaches 85 percent, which is the proposed basin standard (Regional Water Board 2008).

Tasks and Work Elements

The tasks and work elements associated with testing and evaluation of the turbine venting system at Iron Gate will include the following:

- PacifiCorp will conduct further testing of turbine venting during 2009 using a manifold that could provide additional air flow to the turbine draft tube. This air admission manifold is currently capped off but will be opened during the Iron Gate powerhouse annual outage in May 2009. A forced-air blower will be installed on this manifold to increase the air entrainment into the turbine draft tube, which should increase DO below Iron Gate powerhouse.
- A continuous automated water quality datasonde was installed downstream of Iron Gate dam near the Iron Gate Hatchery bridge (at RM 189.8) in June 2008. DO in milligrams per liter (mg/L) and percent saturation (% saturation) will be monitored on an hourly basis before, during, and after turbine venting testing and operations. (Note: the datasonde is also equipped to measure water temperature, pH, specific conductance, and phycocyanin, a surrogate measure of blue-green algae.)
- PacifiCorp plans to implement turbine venting at Iron Gate dam in 2009 when DO levels are observed to fall below 87 percent saturation in the Klamath River immediately below Iron Gate powerhouse.
- After completion of 2009 operations, tests, and monitoring, PacifiCorp will develop a Standard Operating Procedure (SOP) for the turbine venting system in consultation with the National Marine Fisheries Service (NMFS)². PacifiCorp will submit a final turbine venting SOP to the Federal Energy Regulatory Commission (FERC) for its review and approval.

² On November 10, 2008, PacifiCorp submitted an Interim Conservation Plan (ICP) to the NMFS and the U.S. Fish and Wildlife Service identifying interim conservation actions that PacifiCorp proposes to commence implementing at the Project. PacifiCorp developed the ICP in consultation with the Services to address the Services' concerns about potential effects of Project operations on listed species that could occur during the interim period prior to reestablishment of fish passage in the Project area. The implementation of turbine venting, including the development of the SOP, is included in the ICP.

Schedule

Complete blower installation	July 2009
Turbine venting operations and testing	July-October 2009
Turbine venting monitoring	August-September 2009
Technical report	December 2009
Final Turbine Venting Plan/SOP	February 2010

High-Energy Circulator Testing in Copco Reservoir

Purpose and Objective

In 2007 and 2008, PacifiCorp conducted tests of solar-powered water circulators (i.e., SolarBee™) in Copco reservoir to assess the effectiveness of surface or epilimnetic circulation as a reservoir water quality enhancement measure. The intent of such circulation is to mix water and minimize quiescent conditions in surface layers of the reservoirs, such as in the euphotic zone or in coves or embayments, to control algae growth. The surface mixing and agitation caused by this circulation is expected to reduce cyanobacteria (blue-green algae) by reducing their light exposure (by mixing the algae out of the euphotic zone) or disrupting the generally quiescent conditions that may contribute to bloom formation.

Although the tests of solar-powered water circulators showed promise, results were inconsistent and inconclusive, and substantive effects on algae growth were not evident. During 2009, PacifiCorp plans evaluation of another type of circulator that is capable of moving or mixing more water (i.e., higher-energy circulator) than the solar-powered units. It is assumed that a higher-energy circulator would provide more complete (deeper) mixing and light-limited algae growth conditions in the reservoir. Further evaluation is needed to gain better reliability and effectiveness information prior to scaling up to more extensive implementation of circulators in Copco and Iron Gate reservoirs.

Tasks and Work Elements

The tasks and work elements associated with testing and evaluation of the higher-energy circulator in Copco reservoir will include the following:

- Information will be gathered on commercially-available higher-energy mixers/circulators for potential application in Copco reservoir. Emphasis will be placed on mixers/circulators that have a successful record of use in other lakes and reservoirs (e.g., ITT Flygt, KSB). The research literature on use and effectiveness of these higher-energy mixer/circulators will be reviewed and summarized. Manufacturers will be contacted for information and specifications on available mixers/circulators, and the required equipment and power to support them in field applications.

- Information will be gathered on sinking/rising rates of algae in the reservoirs, and mixing depth required to impose light limitation on algae growth. The research literature on sinking/rising rates of algae will be reviewed and summarized, with emphasis on *Microcystis*. Actual bench tests of sinking/rising rates of *Microcystis* may be conducted to supplement this information.
- Based on above information, PacifiCorp will consult with the Regional Water Board on a possible demonstration installation of a higher-energy circulator in a selected cove at Copco reservoir. The demonstration would occur during summer in either 2009 or 2010, depending on the outcome of planning activities described above and lead times required for equipment procurement and installation. The pilot test will be conducted to assess two objectives: (1) to assess operational consistency and reliability in field conditions, and (2) to assess water quality improvement in the “treated” cove area relative to other “untreated” areas, particularly in controlling accumulations of *Microcystis*. Water quality will be monitored before, during, and after deployment of the circulator, and will include in-situ sampling of water clarity (i.e., Secchi depth), vertical profiles (of temperature, dissolved oxygen, and pH), and epilimnetic chlorophyll a and phytoplankton composition. Monitoring will occur in the “treated” cove area and other “untreated” areas in Copco reservoir to test for the effectiveness of the circulator’s lateral mixing and circulation.
- The information developed from the above tasks and work elements will be compiled in a technical report. The conclusions and recommendations of the report will serve as a guide for potential future expanded deployment of circulators in Copco and Iron Gate reservoirs.

Schedule

Information gathering and modeling	June-July 2009
Planning of in-reservoir circulator tests	July-August 2009
Circulator deployment, testing, and monitoring	August-September 2009 or 2010
Technical report	January 2010 or 2011

Mechanical Removal of Algae Biomatter from Copco and Iron Gate Reservoirs

Purpose and Objective

Direct collection and removal (i.e., “harvesting”) of algae bloom material is not common in lakes and reservoirs as a technique for enhancing water quality. Typically direct harvesting cannot feasibly remove a large enough percentage of the algae biomatter to substantially improve water quality. Despite limitations, direct removal from biomass harvesting might offer an optional approach for reducing surface accumulations of algae from localized reservoir areas, such as those areas at or near picnic sites or boat launches. The algae biomatter removed from localized reservoir areas may not make a significant contribution to reducing reservoir eutrophication, but could improve the conditions for users of these areas. On this basis, PacifiCorp plans during 2009 to evaluate the use of an algae collection system in Copco and

Iron Gate reservoirs. PacifiCorp plans to retain the services of Simplexity to assist with this task during 2009.

Tasks and Work Elements

The tasks and work elements associated the evaluation of an algae collection system will include the following:

- Information will be gathered on optional collection techniques and potential uses of algae biomatter from Project reservoirs to help determine whether direct harvesting of algae from the Project reservoirs is a feasible management option. Information would emphasize how harvesting and removal of algae biomatter would be accomplished, and how collected algae biomatter would be disposed or otherwise potentially used. Applicable regulatory requirements associated with such collection, disposal, or uses will be identified.
- PacifiCorp, with assistance from Simplexity, will assess feasibility of alternative conceptual approaches for algae collection. The pros and cons of different approaches will be identified. If feasible, a preferred conceptual system will be recommended with approximate associated costs and timelines for possible construction and implementation. It is anticipated that the recommended algae collection system will take advantage of Simplexity's knowledge and experience in performing harvesting on Upper Klamath Lake using a custom-built harvest system. This system uses on-site vessels and equipment to gather algae biomatter, perform "pre-screening" and "primary separation" steps during which algae biomatter is filtered out of the water with fine mesh screens, and further concentrate the algae material into a paste-like consistency by removing more water using mechanical separators. A tanker truck can then be used to transport the paste-like material for disposal or other uses (to be identified).
- PacifiCorp in consultation with the Regional Water Board and with assistance from Simplexity, will develop a plan to design, construct, and install the recommended algae collection system (if determined feasible). The plan will include details on the design and installation of the algae collection system, operation and maintenance of the installed algae collection system, and transport and disposal of the collected algae material. Proper disposal protocols, practices, and sites will be determined, but could include land application in grassy swales specifically designed for algae removal on near-by PacifiCorp property.

Schedule

Information gathering on optional methods	June-July 2009
Assess feasibility and recommend preferred method	August-September 2009
Design and implementation plan	November 2009

Testing and Evaluation of Chemical Treatment for Localized Algae Control in Project Reservoirs

Purpose and Objective

In 2008, PacifiCorp retained Watercourse Engineering to initiate effectiveness testing of sodium carbonate peroxyhydrate (e.g., PAK™27) applications in Copco and Iron Gate reservoirs based on controlled bench tests using water taken from the reservoirs. Sodium carbonate peroxyhydrate is approved for use as an algaecide by the U.S. Environmental Protection Agency (EPA), and is also approved under NSF/ANSI Standard 60 (drinking water treatment chemicals). On February 27, 2006, the California Department of Pesticide Regulation (DPR) registered sodium carbonate peroxyhydrate for aquatic application as an algaecide used to control blue-green algae (see Water Quality Order No. 2004-0009-DWQ NPDES No. CAG990005 National Pollutant Discharge Elimination System Permit for the Discharge of Aquatic Pesticides for Aquatic Weed Control in Waters of the United States, as amended by adoption of State Water Resources Control Board [State Water Board] Resolution No. 2006-0039).

The bench tests conducted by Watercourse Engineering in 2008 indicated that sodium carbonate peroxyhydrate applications may be effective in reducing the growth of algae in water from the reservoirs. During 2009, PacifiCorp plans to continue effectiveness testing of sodium carbonate peroxyhydrate applications in Copco and Iron Gate reservoirs using larger-scale test enclosures, potentially adjacent to the reservoirs. This further testing will allow additional effectiveness and implementation information to be gathered, and will provide important details on potential full-scale applications to reservoir areas.

Tasks and Work Elements

The tasks and work elements associated with further effectiveness testing of sodium carbonate peroxyhydrate applications in the reservoirs will include the following:

- PacifiCorp and Watercourse Engineering will meet with the Regional Water Board to discuss the results of tests conducted in 2008, obtain input on planned further testing in 2009, and discuss probable regulatory requirements for potential full-scale applications in Copco and Iron Gate reservoirs if pursued in the future.
- Create field study plan for 2009, based on 2008 findings.
- Complete field study and document the results in a technical memorandum.
- The information developed from the above tasks and work elements will be compiled in a technical report. The conclusions and recommendations of the report will serve as a guide for potential future sodium carbonate peroxyhydrate applications in the reservoirs.

Schedule

Meeting and discussions with State Water Board	May-June 2009
Study Plan	June-July 2009

Field Study
Technical report

July-August 2009
February 2010

REFERENCES

- Aldous, A.R., C. B. Craft, C. J. Stevens, M. J. Berry, and L. B. Bach. 2007. "Soil phosphorus release from a restoration wetland, Upper Klamath Lake, Oregon." *Wetlands* 27(4):1025-1035.
- Carpenter, K.D., Snyder, D.T., Duff, J.H., Triska, F.J., Lee, K.K., Avanzino, R.J., and Sobieszczyk, Steven. 2009. Hydrologic and water-quality conditions during restoration of the Wood River Wetland, upper Klamath River basin, Oregon, 2003-05. U.S. Geological Survey Scientific Investigations Report 2009-5004, 66 p.
- Deas, M.L., and J. Vaughn. 2006. Characterization of Organic Matter Fate and Transport in the Klamath River below Link Dam to Assess Treatment/Reduction Potential. Prepared for U.S. Bureau of Reclamation, Klamath Basin Area Office. September 30.
- Duff, J.H., K.D. Carpenter, D.T. Snyder, K.K. Lee, R.J. Avanzino, and F.J. Triska. 2009. "Phosphorus, nitrogen legacy in a restoration wetland, Upper Klamath Lake, Oregon." *Wetlands*. 29(2).
- Lyon, S., A. Horne, J. Jordahl, H. Emond, and K. Carlson. 2008. Preliminary Feasibility Assessment of Constructed Treatment Wetlands in the Vicinity of the Klamath Hydroelectric Project. Draft Report. Prepared by CH2M HILL and Alex Horne Associates. Prepared for PacifiCorp Energy. November 2008.
- PacifiCorp. 2007. Application for Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act for the Relicensing of the Klamath Hydroelectric Project (FERC No. 2082) in Siskiyou County, California. Klamath Hydroelectric Project (FERC Project No. 2082). Prepared for: State Water Resources Control Board, Division of Water Quality, Water Quality Certification Unit, Sacramento. Prepared by: PacifiCorp, Portland, Oregon. February 2007.
- PacifiCorp. 2008. Application for Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act for the Relicensing of the Klamath Hydroelectric Project (FERC No. 2082) in Siskiyou County, California. Klamath Hydroelectric Project (FERC Project No. 2082). Prepared for: State Water Resources Control Board, Division of Water Quality, Water Quality Certification Unit, Sacramento. Prepared by: PacifiCorp, Portland, Oregon. February 2008.
- Rabe Consulting, Geoengineers, and Watercourse Engineering, Inc. 2008. Keno Reservoir Wetlands Feasibility Study, Phase II: Identification and Assessment of Potential Treatment Wetlands Sites in the Upper Klamath River, Klamath County, Oregon. Prepared for the U.S. Bureau of Reclamation, Klamath Basin Area Office. Proposal No. 07SF200051. June 18.

Regional Water Board. 2007. Water Quality Control Plan for the North Coast Region. North Coast Regional Water Quality Control Board, Santa Rosa CA. January 2007.
http://www.swrcb.ca.gov/northcoast/water_issues/programs/basin_plan/083105-bp/070605_Basin_Plan.pdf

Regional Water Board. 2008. Dissolved Oxygen Water Quality Objective CEQA Scoping Document for Potential Basin Plan Amendment. North Coast Regional Water Quality Control Board, Santa Rosa CA. September 2008.

Regional Water Board. 2009a. Water Quality Restoration Plan for the Klamath River Basin in California: Draft Scoping for TMDL Implementation. Klamath River Basin Temperature, Dissolved Oxygen, Organic Matter and Nutrient TMDLs. North Coast Regional Water Quality Control Board, Santa Rosa CA. REVIEW DRAFT. February 2009.

Regional Water Board. 2009b. Draft Recommendations for AIP Interim Measure 12: Water Quality Monitoring Activities for Year 2009. North Coast Regional Water Quality Control Board, Santa Rosa CA. REVIEW DRAFT. February 2009.