

CALFED Bay-Delta Program

Water Quality Program Program Plan Year 9

(State FY 2008-2009; Federal FY 2009)

Implementing Agencies:

California Department of Public Health
U.S. Environmental Protection Agency
State Water Resources Control Board
Central Valley Regional Water Quality Control Board

Coordinating agencies:

California Department of Water Resources
California Department of Fish and Game
U.S. Bureau of Reclamation
U.S. Geological Survey
U.S. Fish and Wildlife Service
NOAA Fisheries

June 15, 2008
Water Quality Program



Introduction

This Water Quality Program Plan identifies the CALFED Program activities that are scheduled to be completed during State Fiscal Year (FY) 2008-2009 and Federal FY 2009. The Plan also describes progress made to date on the previous year's program plan. As appropriate, the Program Plan and activities will be adjusted during the year to reflect, for example, changes in priorities, funding, policies or program direction. The scope of activities described here as well as in last year's program plan reflects the fact that, as of approximately two years ago, the Water Quality Program has expanded to include environmental water quality.

Priorities

Department of Water Resources Project

Water Quality Improvements: The Department of Water Resources (DWR) and the U.S. Bureau of Reclamation (Reclamation) are working on refining the alternatives to protect fishery resources and improve water quality as part of the Franks Tract Project. The agencies will commence preparation of environmental documentation and release a public draft EIR/EIS in mid-2009.

DWR funded projects: The Contra Costa Water District (CCWD) is constructing a screened intake on Victoria Canal that would relocate some of CCWD's diversions to obtain better source water quality and shift diversion from an unscreened intake on Rock Slough. CCWD is also lining a section of their canal to improve source water quality.

State Water Resources Control Board (SWRCB)

Delta Strategy: On December 4, 2007, December 6, 2007, and January 30, 2008 the State Water Board, Central Valley Regional Water Board, and San Francisco Regional Water Board (collectively Water Boards) respectively adopted resolutions committing to various actions to protect beneficial uses of the Bay-Delta. The resolutions directed Water Board staff to work with stakeholders and interested persons, including participants in the Delta Vision, Bay-Delta Conservation Plan, CALFED, and Delta Risk Management Strategy processes, to prepare a strategic workplan that prioritizes and describes the scope of individual activities and provides specificity regarding timelines and resource needs for implementing coordinated activities in the Bay-Delta. The final strategic workplan and scope of specific activities will be submitted to the Water Boards for consideration by June of 2008. Actions proposed for the Delta Strategy include many on-going initiatives including development of a Central Valley Drinking Water Policy. A copy of the final Delta Strategy will be attached to this Program Plan when it is complete.

Water Quality Grant Programs: The SWRCB will be conducting a grant solicitation for projects in the Delta and its watersheds that address the CALFED drinking water quality constituents of concern. Up to \$4.2 million of remaining Prop 50 and Prop 13 funding is available. DWR is also planning a grant program using funds from Prop 84. Eligible projects and amounts are designated in the bond statute including Delta intake relocation, a Franks Tract project, west side San Joaquin Valley salinity reduction, and other San Joaquin and Sacramento valley water quality projects addressing specified contaminants.

U.S.Environmental Protection Agency (EPA)

Activities to promote more comprehensive and systematic water quality monitoring and assessment for the Bay-Delta and its watershed remain a high priority. The need for better water quality information is apparent in important questions such as the role of chemical stressors in the Pelagic Organism Decline; potential effects of emerging contaminants in Delta waters on human health (as a drinking water source) and the ecosystem; and water quality effects of conveyance alternatives. We expect our efforts to tie into other initiatives, notably the comprehensive monitoring element of the Strategic Work Plan being developed by the Water Boards.

A second priority is improving understanding of potential cumulative water quality impacts of urbanizing within the Delta's legal boundary. Information from work prepared through a contract with Tetra Tech Inc./U.C. Berkeley will be used by the U.S. Army Corps of Engineers and EPA for review of projects under Section 404 of the Clean Water Act and the associated environmental impact documents pursuant to the National Environmental Policy Act.

Performance Measures

Performance Measures are used to translate program goals and objectives into measurable indicators of progress. They are a vital part of adaptively managing the program to provide decision-useful information about areas of success as well as weakness, thus revealing opportunities for adjustment. CALFED recently completed its Phase 1 effort and has initiated its Phase 2 effort.

Progress Report

CALFED Water Quality Program – Stage 1 Final Assessment (CALFED)

Completed work on the final assessment in December 2007. The Final Assessment Report is currently going through a CALFED Science Program peer review.

Delta Vision

The Delta Vision Blue Ribbon Task Force recommended that a process “be launched to urgently assemble available information (including expert judgment where needed) on design features, cost, and performance of alternative conveyance options against specified criteria to allow selection of preferred alternative by June 2008.” One of the performance standards to be used as criteria in summarizing and evaluation conveyance options is water quality. The Water Quality Program prepared a water quality section for the Conveyance Assessment report for the Blue Ribbon Task Force.

Franks Tract

DWR continued monitoring flow and salinity to establish baseline conditions for subsequent analysis. DWR completed a long-term (16 years) study of salinity reduction at key locations in the south Delta for Three-Mile Slough and West False River alternatives. DWR prepared a 10% level of design and preliminary geotechnical report for these alternatives. DWR completed a workplan for an EIR/EIS and public participation. They also hired a consultant to help with preparing the EIR/EIS. DWR will begin preparing the environmental documentation and release a public draft EIR/EIS in mid-2009.

CCWD Alternative Intake Project

CCWD completed and circulated to the public the Final EIR/EIS in October 2006. The U.S. Fish and Wildlife Service Biological Opinion was completed in April 2007 and the National Marine Fisheries Service Biological Opinion was completed in July 2007. Reclamation completed a draft federal Special Study in January 2008. The completion of these environmental compliance activities will move the project from planning and environmental review to project implementation when EPA executes a Record of Decision.

CCWD Canal Replacement project

This is a sub-project of the original Veale-Byron Tract Project in the ROD and was included in the Delta Improvements Project. The overall project objective is to improve source water quality. The project also improves supply reliability for the State and Federal Water Projects. The design of Phase 1 is complete and construction is planned to start in 2009. Design for Phase 2 is underway and construction is scheduled to start in 2012. All permits and approvals for the entire project have been secured. 47 acres of new wetlands are being constructed on nearby Holland Tract as mitigation. Construction of the wetlands is being initiated in 2008.

Delta Mendota Canal Recirculation Feasibility Study

U.S. Bureau of Reclamation (Reclamation), in cooperation with DWR, has completed an Initial Alternatives Information Report on the potential to use Delta Mendota Canal (DMC) recirculation as a means to improve water quality in the lower San Joaquin River, while also reducing the use of New Melones water releases to meet flow and water quality objectives. Pilot studies of DMC recirculation were also completed in 2004 and 2007 utilizing the Newman Wasteway, with extensive water quality monitoring conducted in coordination with the Central Valley Water Board and the State Water Board. In 2008 a Plan Formulation Report is scheduled for completion followed by the Feasibility Study and EIS/EIR in 2009. Further details regarding the DMC Recirculation Feasibility Study are provided under the Conveyance Program Plan for Year 9.

Program to Meet Standards

Reclamation is conducting a number of activities under the Program to Meet Standards, pursuant to Public Law 108-361, to improve water quality in the San Joaquin River. Key program activities include the DMC Recirculation Feasibility Study and Pilot Studies, the development of Best Management Practices Plans for wildlife refuges receiving federal water and discharging to the San Joaquin River, development of the Westside Regional Drainage Plan, real time water quality monitoring and water quality modeling for the San Joaquin River and development of a revised operating plan for the New Melones Reservoir water releases. Further information on the Program to Meet Standards is provided in the Conveyance Program Plan for Year 9.

Central Valley Drinking Water Policy (CVRWQCB)

The Regional Water Board, working with the Central Valley Drinking Water Policy Work Group, is conducting the technical work necessary to improve policies for protecting sources of drinking water in the Central Valley. The Work Group initiated work to develop cost estimates for drinking water treatment under current and projected future water quality conditions. They held a scoping meeting with invited experts to develop the scope of work for the project. The consultant was hired and began work on the evaluation in March 2008. The Work Group also developed a scope of work and request for proposals for developing analytical models for the high priority drinking water

constituents of concern. Regional Water Board staff drafted the scoping document, which will be used to frame discussions during project scoping meetings slated for summer 2008.

Department of Public Health Grant Programs (DPH)

The Department of Public Health established priority lists for their Prop 50 funds identifying 13 water treatment improvement and research projects with a total grant value of \$119 million.

San Joaquin Basin Water Quality Monitoring Partnership (USEPA, with CVWQCB and the Great Valley Center; work through a cooperative agreement with SFEI)

Guided interviews with key users and generators of water quality monitoring data in the San Joaquin region led to a workshop in fall 2007 which focused on options for improved monitoring and assessment. The range of options included sampling coordination, quality assurance, data analysis and interpretation, promotion of a data center, and institutional support.

San Joaquin Basin Water Quality Indicators (USEPA, through a grant to SFEI)

This study developed and tested indicators of selected water quality impairments, causes, and management responses to determine ability to measure the effects of management activities intended to improve water quality. The test cases, chosen to track Central Valley Regional Water Quality Control Board TMDLs, were selenium in the Grasslands watershed and salinity in the San Joaquin Basin (measured at the Vernalis compliance point). The draft report was circulated for comment to an Advisory Committee and others with experience in indicators design.

Delta Cumulative Impacts Study (US EPA contract with TetraTech/U.C. Berkeley)

EPA contracted with Tetra Tech for Phase 1 of the study to use current Delta-based water quality and hydrodynamic models that will allow for evaluation of cumulative water quality impacts of urban development on aquatic resources.

CALFED Program: Water Quality Performance Measures

A multi-agency team completed a draft Phase 1 Report on performance measures for water quality relating to drinking water and ecosystem protection. The Report focused on indicators (performance measures) for long-term outcomes, although preparatory work and conceptual models also identified causal 'drivers' and intermediate outcomes which could be the basis for reporting of performance in the nearer term.

Activity

Franks Tract

- **Description of Activity:** The Department of Water Resources and the U.S. Bureau of Reclamation are working on refining the alternatives of modifying river channels and/or Delta recirculation patterns to protect fishery resources and improve water quality.
- **Expected Deliverables/Products:** Baseline data collection reports; Preliminary Geotechnical Engineering Report; Alternatives Analysis Report; Administrative Draft EIR/EIS; Public Draft EIR/EIS

- Schedule: Baseline data collection reports (July 08); Preliminary Geotechnical Engineering Report (Aug08); Alternatives Analysis Report (Aug 08); Administrative Draft EIR/EIS (Dec 08); Public Draft EIR/EIS (July 09)
- Cost: \$ 3.3 mil (State), \$ 0.9 mil (SWP)
- Potential Problems: Ongoing coordination and preparation of Operations Criteria and Plan (OCAP) biological opinion may continue through late-2008, potentially delaying the Franks Tract Project.
- Performance Measure Development: To be addressed in NEPA/CEQA documents.
- Science Review or Science Understanding: Fisheries and Modeling Workgroups; CALFED Science Program
- Public Involvement and Outreach: As part of the CEQA/NEPA process, meetings and workshops will be arranged to discuss the potential project with the public, stakeholders, and all responsible agencies.
- Linkages with Other Elements: Water Quality Program and Environmental Restoration Program.
- Environmental Compliance: To be addressed in NEPA/CEQA documents.
- Environmental Justice: To be addressed in NEPA/CEQA documents.
- Tribal Activities: To be addressed in NEPA/CEQA documents.

CCWD Alternative Intake Project

- Description of Activity: Contra Costa Water District (CCWD) is constructing a screened intake on Victoria Canal that would relocate some of CCWD's diversions to obtain better source water quality and shift diversion from an unscreened intake on Rock Slough.
- Expected Deliverables/Products: Project construction begins in May 2008 and is expected to be completed in 2010. A federal Record of Decision (ROD) was executed on May 2, 2008 to change the point of diversion specified in the CCWD water service contract.
- Schedule: A CESA permit for operations is expected by June 2008, followed by approval of the water right petition to add the point of diversion.
- Cost: Costs for this fiscal year are limited to Reclamation labor costs necessary to complete a ROD and resolve OCAP issues. CCWD will be applying for state grant funds under Proposition 84 for a portion of construction costs.
- Potential Problems: Final OCAP re-consultation could result in re-consultation on the biological opinion for this project.
- Environmental Compliance: Complete. Addressed in CEQA/NEPA documents.
- Environmental Justice: Has already been addressed in the EIS/EIR completed last fiscal year.

CCWD Canal Replacement Project

- Description of Activity: CCWD is lining a portion of the canal to protect the District's drinking water supply from existing and future water quality degradation caused by seepage of contaminated groundwater.
- Expected Deliverables/Products: Construction of Phase I and wetland mitigation lands near Holland Tract. Preparation of design for Phase II.
- Schedule: Wetland construction (2008); Begin Phase I Construction (2009); Phase II design (2010).
- Cost: \$ 10.1 mil (State).
- Potential Problems: None.
- Science Review or Science Understanding: Addressed in NEPA/CEQA documents.
- Public Involvement and Outreach: Addressed as part of the CEQA/NEPA process.
- Linkages with Other Elements: Environmental Restoration Program.
- Environmental Compliance: Complete. Addressed in NEPA/CEQA documents.
- Environmental Justice: Addressed in NEPA/CEQA documents.
- Tribal Activities: Addressed in NEPA/CEQA documents.

Central Valley Drinking Water Policy

- Description of Activity: A multi-year effort is currently underway to develop a drinking water policy for surface waters in the Central Valley. As water flows out of the Sierra foothills and into the valley, pollutants from a variety of urban, industrial, agricultural, and natural sources affect the quality of water, which leads to drinking water treatment challenges and potential public health concerns. Current policies and plans lack water quality objectives for several known drinking water constituents of concern, such as disinfection by-product precursors and pathogens, and do not include implementation strategies to provide effective source water protection. The exact types of regulatory requirements that will be included in the drinking water policy have not been determined but the goal is to develop a policy that provides clear guidance to ensure consistent source water protection.
- Expected Deliverables/Products: CEQA scoping meetings, water treatment cost evaluation final report, analytical models, monitoring NPDES facilities for drinking water constituents of concern, completion of final data summaries, and monitoring plan for pathogens in Central Valley surface waters.
- Schedule: CEQA scoping meetings (Summer 08); water treatment and evaluation final report (Feb 09); analytical models (Feb 09); monitoring NPDES facilities for drinking water constituents of concern (conducted monthly for one year beginning in Spring 08); final data summaries (Summer 09), and monitoring plan for pathogens in Central Valley surface waters (Jun 09).
- Cost: Proposition 50 grant - \$650K; CUWA/SRCSD funding Regional Water Board staff - \$115K

- Performance Measure Development: Data gathered and analyzed for the drinking water policy development will be integrated into the performance measures development and reporting.
- Public Involvement and Outreach: Public involvement will be sought during all listed tasks. Stakeholders will have ample opportunity to provide input on final reports for technical tasks. Outreach to stakeholders is an ongoing task.

Department of Public Health Grant Programs

- Description of Activity: Treatment Technology Pilots are being carried out by the California Department of Public Health Services (CDPH) through Proposition 50 grants (Chapters 4a2 and 6b). The Source Improvement Grants are being carried out by the Department of Public Health through Source Water Protection Grants from Proposition 50 and Source Water Protection loans from the federally-funded Safe Drinking Water Act State Revolving Fund.
- Expected Deliverables/Products: Implementation of treatment processes to decrease level of disinfection byproducts (DBPs) produced in the distribution system.
- Schedule: (need input)
- Cost: Proposition 50 grant.
- Potential Problems: (need input)
- Public Involvement and Outreach: CDPH uses a public process in the development of criteria and the implementation of its funding programs. For instance, after presenting the draft Prop 50 implementation criteria at a series of public workshops around the state, CDPH established a stakeholder group with representatives from small and large drinking water systems, advocates for environmental justice and disadvantaged communities, and organizations representing water systems.
- Environmental Justice: CDPH worked with the previously mentioned stakeholder group in finalizing funding priority lists and project invitation lists and in developing changes in the criteria to improve access to funding for water systems serving disadvantaged communities. The same stakeholder group is participating in the development of CDPH's Proposition 84 criteria.

State Water Resources Control Board Grant Program

- Description of Activity: The Source Improvement Grants are also being carried out by the State Water Resources Control Board through grants from Proposition 13 and Proposition 50.
- Expected Deliverables/Products: Grant Program
- Schedule: Concept proposals – June 2008, Final selection of projects by November 2008
- Cost: up to \$4.2 million Proposition 13 and 50 grant funding.

- Potential Problems: Coordination with other grant programs
- Public Involvement and Outreach: Water Quality Subcommittee
- Environmental Justice: Part of the selection process.

SWRCB Delta Strategy

A copy of the final Delta Strategy report will be attached to the Program Plan when it is complete.

Program to Meet Standards (Reclamation)

- Description of Activity: A multi -year program is currently being conducted by Reclamation to implement the Program to Meet Standards (PTMS) activities specified in Public Law 108-361. These activities are designed to help meet the water quality standards and objectives for which the Central Valley Project has responsibility. A major component of this effort is the Delta Mendota Canal Recirculation Feasibility Study.
- Expected Deliverables/Products: Plan Formulation Report in 2008 and Feasibility Study and EIS/EIR in 2009.
- Schedule: Plan Formulation Report complete in Fall 2008; Final Feasibility Study Report and EIS/EIR May 2009 with a Record of Decision in June 2009.
- Cost: \$3 Million (Reclamation)
- Potential Problems: The Westley Wasteway (one of the paths to the San Joaquin River from the DMC) is no longer connected to the San Joaquin River due to river migration over time. Total Suspended Solids and turbidity have been parameters of concern during the 2004 and 2007 pilot studies of recirculation.
- Performance Measure Development: N/A
- Science Review or Science Understanding: to be developed in the NEPA/CEQA documents and the Fisheries Technical Memorandum
- Linkages to Other Elements: Conveyance, Environmental Restoration
- Environmental Compliance: Addressed in NEPA/CEQA documents
- Environmental Justice: Addressed in NEPA/CEQA documents
- Tribal Activities: Addressed in NEPA/CEQA documents

San Joaquin Basin Water Quality Monitoring Partnership (US EPA funding of a cooperative agreement with SFEI)

- Description of Activity: Continuing from the previous FY, the Monitoring Partnership project will present options for improving water quality monitoring and assessment for the San Joaquin River region. The monitoring strategy, which will be summarized in a final report this year, will address sampling coordination, standardization of methods and quality

assurance, analysis and interpretation of data, establishment of a 'data access and management center,' and options for implementation (funding and other institutional arrangements). Another component of the project is an on-line directory of monitoring in the San Joaquin basin. EPA expects this project to contribute to a more comprehensive monitoring program for the Bay-Delta watershed.

- Expected Deliverables/Products: (a) a final report that includes specific recommendations and/or proposed agreements for implementing key activities for a basin-wide monitoring and assessment. It is expected that the data center will be among these elements; (b) a pilot web-based monitoring directory for the San Joaquin region, coordinated with a Central Valley-wide directory being funded by Regional Board 5.
- Schedule: all work completed by the end of calendar year 2008.
- Cost: remaining US EPA funds \$60,000.
- Potential Problems: Coordination of the San Joaquin monitoring partnership project with other agencies and programs is needed. For example, there may be opportunities to align this work with the State Water Board/Regional Boards 2 and 5 proposal for a comprehensive Delta-wide water quality monitoring program.

San Joaquin Basin Water Quality Indicators (US EPA)

- Description of Activity: By mid-2008 the final Project Report will be available on the EPA and SFEI websites. A summary of reviewers' comments evaluating the methodology and potential uses will be included. Because this Report tests ability to measure the impact of factors 'controlling' water quality—particularly, the effectiveness of pollution control measures—it represents an approach to program performance measures which may interest water quality managers.
- Expected Deliverables/Products: final project report.
- Schedule: mid 2008
- Performance Measure Development: This project has potential to contribute to CALFED performance measures. Following completion of the final Report, we suggest review by the Independent Science Board.

Delta Cumulative Impacts Study (US EPA)

- Description of Activity: Using models identified in Phase I, the Phase II study will evaluate and quantify the effect on Delta water quality under: (i) likely urban growth (business as usual) and (ii) options for adaptive management such as those described in the Public Policy Institute of California report (Lund et al, 2007). Analysis will quantify impacts to the aquatic environment (absent catastrophic flooding) due to increased wastewater and stormwater discharges, loss of wetlands and other aquatic habitat due to fill, and other impact information.
- Expected Deliverables/Products: unknown

- Schedule: unknown, awaiting Phase 1 product.
- Cost: unknown, awaiting Phase 1 product.
- Potential Problems: funding not yet identified.

Performance Measures

- Description of Activity: A multi-agency team completed development and begin implementation of a limited, initial set of water quality performance measures to assess program effectiveness in the future. Profiles developed for bromide, methyl mercury, and total organic carbon will be used to develop performance measures and to recommend needed future monitoring.
- Expected Deliverables/Products: A Phase 2 progress report will be prepared based on available data.
- Schedule: Complete Phase 2 Progress Report by end of 2008.
- Cost: N/A
- Potential Problems: Difficulty accessing data.
- Science review or Science Understanding: The multi-agency team and the Independent Science Board (ISB) will work with the CALFED Science Program to evaluate and integrate the data as it relates to outcome (Level 3) performance measures.

NOTE: The CALFED Water Quality and Ecosystem Restoration programs aim to improve Delta water quality for all uses: in-Delta agricultural use, drinking water, and environmental water uses. The Water Quality Program has primarily focused on the use of Delta water for drinking and, to some degree, for agricultural use.

The Ecosystem Restoration Program has a broader focus on environmental water quality, including the needs of Central Valley fish and wildlife species. The Ecosystem Restoration Program has funded efforts to increase dissolved oxygen in the Stockton Deepwater Ship Channel, research on mercury cycling and transport, and projects related to pesticides and legacy contaminants. This coming year, the Ecosystem Restoration Program's focus of environmental water quality in the Delta will include:

- Characterizing the impacts of upstream San Joaquin River algae loads on dissolved oxygen in the Stockton Deepwater Ship Channel;
- Research in the Yolo Bypass to develop Best Management Practices (BMPs) to reduce methyl mercury in the Bypass and other wetlands;
- Also, the Ecosystem Restoration Program is considering whether to assist in a project for the Cache Creek Settling Basin involving research and improvements to reduce the amount of methyl mercury entering the Yolo Bypass from this source.