

# CALFED Bay-Delta Program

## FINAL DRAFT Conveyance Program Program Plan Year 10 (State FY 2009-2010; Federal FY 2010)

Implementing Agencies:  
**Department of Water Resources**  
**U.S. Bureau of Reclamation**

July 1, 2009



# Introduction

This Conveyance Program Plan identifies the CALFED Program activities that are scheduled to be completed during State Fiscal Year (FY) 2009-2010 and Federal FY 2010. The Plan also describes progress made to date since the previous year's plan. As appropriate, this Plan and activities will be adjusted during the year to reflect, for example, changes in funding, policies or program direction.

Stage 2 of the CALFED Program was initiated on July 1, 2008<sup>1</sup>. Continuing evaluation and implementation of CALFED actions initiated during Stage 1 was accompanied by conclusion of the Delta Vision process at the end of 2008 which included a suite of strategic recommendations for long-term, sustainable management of the Sacramento-San Joaquin Delta. CALFED agencies are evaluating alternative approaches for Delta conveyance by participating in developing the Bay Delta Conservation Plan (BDCP). Modeled after a Habitat Conservation Plan (HCP) and/or a Natural Communities Conservation Plan (NCCP), the BDCP is an agreement among state, federal, regional and stakeholder groups for funding assurances, cooperation and coordination for integrated implementation of aspects of the CALFED Bay-Delta Program. The Department of Water Resources' Delta Habitat Conservation and Conveyance Program is preparing the environmental documentation for the BDCP. CALFED agencies will assess recommendations from Delta Vision and BDCP and will incorporate those recommendations as appropriate as the agencies shape and implement actions over the next several years.

The goal of the Conveyance Program is to identify and implement water conveyance modifications in the Delta that will:

- Improve water supply reliability for in-Delta and export users
- Support continuous improvement in Delta water quality for drinking-water purposes
- Complement and, where possible, improve the ecosystem

A map of the specific elements of the CALFED Conveyance Program can be found in Appendix A.

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<sup>1</sup> CALFED Stage 2 follows completion of Stage 1 referring to the first 7 years of the CALFED Program which corresponded to State Fiscal Years 2000-01 through 2006-07.

# Progress Report

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**South Delta Actions** - to increase State Water Project (SWP) and Central Valley Project (CVP) export capability, improve the Delta ecosystem through fish protective measures, and ensure that local in-Delta agricultural water needs are met.

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## **South Delta Improvement Program (SDIP) - Permanent Operable Gates**

**Progress:** The SDIP reinitiated consultation on the operations of the permanent operable gates through the Operations Criteria And Plan (OCAP) Endangered Species Act consultation process. The OCAP Biological Assessment included operations of the permanent operable gates. The US Fish and Wildlife Service Biological Opinion (BO) that included SDIP operational coverage was released in December 2008 and the National Marine Fisheries Service (NMFS) BO is due to be released in June 2009. Based on a draft opinion, it is anticipated that the NMFS BO will not provide operational coverage for SDIP and consultation will need to be reinitiated for operation and construction. NMFS may require further fish predation studies at the temporary barriers prior to reinitiation of Section 7 consultation. A supplemental EIS/EIR is being prepared to address project description and environmental changes. Project designs have continued to be refined over the last year, and as dredging design progresses, the associated project description for dredging is being modified. The project implementation schedule still has a high level of uncertainty, and it is unlikely that fully operational gates will be in place before Spring 2015.

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## **South Delta Fish Facility Improvements:**

**Progress:** Continued work on the Capture, Handling, Transportation, and Release (CHTR) program and steelhead pre-screen loss study report. CHTR activities included completion of a draft report by DWR. Based on the study recommendations a number of short-term improvements have been underway at the John E. Skinner Delta Fish Protective Facility. The progress of the steelhead study included completion and publishing of the final report.

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## **Tracy Fish Test Facility:**

**Progress:** Improve debris management at the federal Tracy Fish Collection Facility (TFCF) such that impacts to salvage operations are minimized. In federal FY2009, a contract was awarded for construction of a new trashrack cleaner at the TFCF. Progress was also made towards conceptual design of new primary and secondary channel louvers and cleaning systems. In addition, evaluation of the Chinese mitten crab traveling screen as a potential device for removing debris from the secondary channel of the TFCF was completed and published. Studies were also commenced looking at easing debris impacts inside the recessed holding tanks by lifting the holding tank screens.

Improve the ability to remove/manage predator fish located within the confines of the TFCF to reduce predation impacts on salvage operations. In federal FY2009, work

was published related to tracking of predator fish (striped bass) located in and around the TFCF. Studies also continued related to attempting to quantify the buildup of predators within the confines of the primary channel and assessing the impacts of these predators on TFCF's ability to properly salvage fish. Tests were also conducted in the lab in Denver looking at the use of strobe lights as a predator deterrent.

Improve hydraulic control and salvage performance of TFCF. Assessed the TFCF's present day ability to salvage various delta fish species and implement measures to improve hydraulic performance and salvage efficiency. In federal FY2009, work continued related to evaluating the TFCF for present day efficiencies for delta smelt, chinook salmon, and white sturgeon. Work also commenced related to looking at modifying the bypass system to improve hydraulic operation, evaluating the recessed holding tank screens for loss of small/larvae delta smelt, and set up of the above ground oval tanks to study improved holding, fish separation, and debris removal techniques. Work was also published related to re-evaluation of the Bates Table used for fish hauling criteria.

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### **Lower San Joaquin River Flood Improvements**

**Progress:** A Feasibility Cost-Sharing Agreement (FCSA) was executed February 19, 2009, between the U.S. Army Corps of Engineers (Corps) and the Local Sponsor, San Joaquin Area Flood Control Agency (SJAFC). According to the FCSA, SJAFC agrees to contribute cash and in-kind services equal to fifty (50) percent of the study cost. Total study cost is estimated at \$10.6 million (2009).

There is expectation that the State, through the Central Valley Flood Protection Board and the Department of Water Resources, will also join in the study as a cost-sharing partner. The cost share is 50%/50% federal/nonfederal, and the expected nonfederal cost share is 50%/50% State/Local Sponsor.

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**Program To Meet Standards** - to develop and initiate implementation of a program to meet all existing water quality standards and objectives for which the Central Valley Project has responsibility.

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### **Program to Meet Standards (PTMS):**

**Progress:** Reclamation continued to implement activities specified in PL 108-361 for the PTMS. Continue Westside Regional Drainage Plan efforts to reduce and manage salt, selenium, and boron discharges. Other key activities include BMPs for the refuges receiving Federal water in the San Joaquin River (SJR) Basin and development of a stakeholder-led real-time water quality program for the SJR.

### **DMC Recirculation Feasibility Study & Pilot Studies:**

**Progress:** An Initial Alternatives Information Report on the feasibility of DMC recirculation was completed and provided to stakeholders in early 2008. Work on the Plan Formulation Report (PFR), the Feasibility Study and EIS/EIR will continue in 2009. DMC recirculation pilot studies, including extensive water quality monitoring, were conducted in years 2004, 2007, and 2008 pursuant to study plans coordinated

with the Central Valley Regional Water Quality Control Board, the State Water Resources Control Board, and input from stakeholders.

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**North Delta Actions** - to improve flood protection and conveyance facilities, water quality, Delta fisheries, and avoid water supply disruptions, to increase the water supply reliability for the SWP and CVP and to enhance the Delta ecosystem.

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**Delta Cross Channel Re-Operation and Through-Delta Facility (Delta Improvements Package):**

**Progress:** CALFED Independent Science Review of the Regional Salmon Outmigration Study plan was completed. The fish release strategy was modified in accordance with the recommendations of the science review panel. The field work for the study was completed. However, due to the stop work order on State bond funded projects, work on processing and analyzing the project data has been put on hold. An alternate source of funding is being explored to fund the analysis of the fish movement and hydrodynamic data collected during the study.

Flow and salinity data from the monitoring stations in North and Central Delta was collected and regularly posted on California Data Exchange Center website.

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**Frank's Tract (A project component of the CALFED Water Quality Program and Delta Improvements Package):**

**Progress:** Completed public scoping meetings for the project EIS/EIR. Completed collection of baseline environmental data for the project. Using extensive hydrodynamic and particle tracking modeling, developed preliminary gate operations to protect Delta fisheries and reduce sea water intrusion into the central and south delta. Completed conceptual level design layouts for the project alternatives. The State's project schedule has been delayed by the stop work order on State bond funded projects. However, the USBR continues making progress with preparation of the North Central Delta Initial Alternatives Investigation Report and Plan Formulation Report.

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**North Delta Flood Control and Ecosystem Restoration Project:**

**Progress:** A public hearing for the Draft Environmental Impact Report was held on February 21, 2008 at the Jean Harvie Community Center in Walnut Grove. The 60-day public comment period extended through March 27, 2008 to allow stakeholders ample opportunity to comment on the substantive document. DWR staff continues to meet with the US Army Corps of Engineers (USACE) to investigate partnering with the federal agency in the implementation and funding of the Project. Participation of the USACE would be through the CALFED Levee Stability Program.

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**Delta Mendota Canal/California Aqueduct (DMC/CA) Intertie Actions**– to consider the need for two specific SWP/CVP intertie projects which physically connect the SWP and CVP facilities.

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**Delta Mendota Canal/California Aqueduct Intertie (Delta Improvements Package):**

**Progress:** In 2008, the US Fish and Wildlife Service analyzed and permitted the operations of the Intertie. The project footprint effects of the Intertie will be analyzed in a separate Biological Assessment which is being developed.

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**Clifton Court Forebay/Bill Jones (Tracy) Pumping Plant Intertie:**

**Progress:** Work on this project has not yet commenced.

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**Complementary Actions** – to consider actions that were identified in the Framework for Action but were not analyzed in the Final Programmatic EIR/EIS.

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**Temporary Barriers Project:**

**Progress:** Three agricultural barriers were successfully installed in the south Delta. The spring Head of Old River Barrier was not installed in 2008 due to a court order promulgated to protect delta smelt. The fall Head of Old River barrier was installed in 2008 per DFG request. Portable pumps were not needed in 2008 as flows were sufficient during the summer and water levels remained adequate for agricultural diversions, both at the Tom Paine Slough and elsewhere in the south Delta.

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**Additional Actions Under Delta Improvement Package** – actions to increase water supply reliability, improve water quality, protect important fish species, and maintain the integrity of the levee systems in the Delta.

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**South Delta Hydrodynamics Study:**

The US Geological Survey continued to monitor flow and water quality at stations in the south Delta under agreement with the Department of Water Resources. This effort was suspended by the stop work order on State bond funded projects. The agreement is set to expire at the end of December 2009 and no alternate funding sources have been identified to continue this monitoring effort.

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**Study of Delta Smelt and Fish Facilities:**

(See Tracy Fish Test Facility)

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**CCWD Alternative Intake Project (A project component of the CALFED Water Quality Program and Delta Improvements Package):**

**Progress:** Completed and circulated to the public the Final EIR/EIS in October 2006. Secured the U.S. Fish and Wildlife Biological Opinion in April 2007. Secured the National Marine Fisheries Service Biological Opinion in July 2007. Completed a federal Special Study in May 2008. A federal Record of Decision (ROD) was issued in May 2008 to add a point of diversion specified in the CCWD water service contract. Construction is underway and anticipated to be completed in 2012.

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**SWP/CVP Integration Plan** - the use of CVP stored water to meet SWP Delta water quality obligations and SWP export capability for CVP south-of-Delta deliveries.

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(Included in Stage 2 of the South Delta Improvement Program)

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# Activity

## Conveyance Program Activities Planned for Year 10

**South Delta Actions** – to improve the Delta ecosystem through fish protection measures, and ensure that local in-Delta agricultural water needs are met.

**Activity: South Delta Improvement Program (SDIP) - Permanent Operable Gates**

Expected Deliverables/Products: Revised Draft Action Specific Implementation Plan (ASIP); Draft Supplemental Environmental Impact Statement and Report.

Schedule: Revised Draft ASIP (4/10); Obtain ESA and CESA take permits (3 years of fish predation studies at the temporary barriers prior to Section 7 consultation) and other required permits (09/12); Notice of Determination and; Record of Decision (10/12); Advertise for construction contract (01/13); Begin gate construction (08/13).

Cost: \$4.5 mil (SWP)

Potential Problems: The design of the Head of Old River gate may need to be reevaluated because of concerns associated with NMFS and USFWS protected fish species.

Performance Measure Development: N/A

Science Review or Science Understanding: Addressed in NEPA/CEQA document.

Public Involvement and Outreach: Regular web site updates. Quarterly reports to key stakeholders.

Linkages with Other Elements: Environmental Restoration Program, Environmental Water Account and the Water Quality Program.

Environmental Compliance: Addressed in NEPA/CEQA documents.

Environmental Justice: Addressed in NEPA/CEQA documents.

Tribal Activities: Addressed in NEPA/CEQA documents.

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**Activity: South Delta Fish Facility Improvements**

Expected Deliverables/Products: Manuscripts for two peer-reviewed journal articles discussing salvage process and entrainment of fish in the south Delta will be submitted. Also, final reports will be prepared for the CHTR studies. Posters and oral presentations will be provided at fishery conferences.

Schedule: Final reports for CHTR study (12/09); short-term facility improvements and investigation of new release sites will continue.

Cost: Fishery Survival Improvements (CHTR) program: \$1.0 mil (SWP) and \$0.5 mil (Prop 13):

Potential Problems: Funding must be secured for development and implementation of alternative measures to reduce the fish salvage mortality/injury and predation on

steelhead and other fish species in Clifton Court Forebay.

Performance Measure Development: N/A

Science Review or Science Understanding: Study data and reports are reviewed through the Central Valley Fish Facilities Review Team and Interagency Ecological Program.

Public Involvement and Outreach: Continue to present data at local conferences, IEP Asilomar Conference, CALFED Science Conference, and AFS Cal-Neva meeting.

Linkages with Other Elements: Environmental Water Account, Interagency Ecological Program, Hydrodynamic study - Science program. Pre-screen loss study - 2004 NOAA Fisheries Biological Opinion and South Delta Permanent Gates: and CHTR – South delta fish facility forum.

Environmental Compliance: N/A

Environmental Justice: N/A

Tribal Activities: N/A

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**Activity: Tracy Fish Test Facility**

Expected Deliverables/Products: Improve the TFCF's ability to remove debris such that impacts to salvage operations are minimized.

Schedule: In federal FY2010, work will be completed related to installation of a new trashrack cleaner at the TFCF. Design of new primary and secondary louvers and cleaning system should also be completed in 2010. Data will also be published in 2010 related to lifting of the holding tank screens as a means for alleviating the buildup of debris in the holding tanks. Work will also commence in 2010 looking at removing debris from the holding tanks via mechanical means, evaluation of the new fish transfer buckets, and assessing the secondary channel screened water system as a means for improving debris impacts in the secondary channel.

The deliverables/products cited above will commence through federal FY2010 as opportunity and operations permit.

Costs: For the deliverables/products cited above will be approximately \$1.2 million and funding will come from federal appropriations (Water & Related Resources) and includes program management costs and cost for publishing research data and updating/maintenance of the Tracy Research website. It should be noted some of the funding was obligated in FY2009 and some of the funding is not included in the Cross-Cut budget.

Performance Measure Development: N/A

Science Review or Science Understanding: N/A

Public Involvement and Outreach: N/A

Linkages with Other Elements: N/A

Environmental Compliance: N/A

Environmental Justice: N/A

Tribal Activities: N/A

Expected Deliverables/Products: Improve management of predators located within the TFCF in order to reduce predation impacts on salvage operations.

Schedule: In federal FY2010, work will continue related to studying the buildup of predators in the primary channel of the TFCF, assessing the impact of these predators on the ability of the TFCF to properly salvage fish, and testing means to remove the predators out of the bypass system using CO2. Work will also begin in FY2010 related to use of electric pulse fish crowders also as a means of separating predator fish from prey fish.

The deliverables/products cited above will commence through federal FY2010 as opportunity and operations permit.

Costs: For the deliverables/products cited above will be approximately \$700,000 and funding will come from federal appropriations (Water & Related Resources) and includes program management costs and cost for publishing research data and updating/maintenance of the Tracy Research website.

Performance Measure Development: N/A

Science Review or Science Understanding: N/A

Public Involvement and Outreach: NA

Linkages with Other Elements: N/A

Environmental Compliance: N/A

Environmental Justice: N/A

Tribal Activities: N/A

Expected Deliverables/Products: Assess the TFCF's present day ability to salvage various delta fish species and implement measures to improve hydraulic performance and salvage efficiency.

Schedule: In federal FY2010, work will continue related to evaluating the present-day TFCF efficiencies for delta smelt, Chinook salmon, and white sturgeon. Work will also commence related to TFCF efficiency evaluations for splittail and assessing existing criteria for hauling of fish and mortality impacts. Work will also continue related to looking at modifying the bypass system to improve hydraulic performance and testing of the above ground oval holding tank to look at improved holding of fish, separation of larger fish from smaller fish, and removal of debris. Data should also be made available and published in 2010 related to evaluating the holding tank screens for loss of small/larvae delta smelt.

The deliverables/products cited above will commence through federal FY2010 as opportunity and operations permit.

Costs: For the deliverables/products cited above will be approximately \$800,000 and funding will come from federal appropriations (Water & Related Resources) and includes program management costs and cost for publishing research data and updating/maintenance of the Tracy Research website.

Performance Measure Development: N/A  
Science Review or Science Understanding: N/A  
Public Involvement and Outreach: N/A  
Linkages with Other Elements: N/A  
Environmental Compliance: N/A  
Environmental justice: N/A  
Tribal activities: N/A

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**Activity: Lower San Joaquin Flood Improvements**

Expected Deliverables/Products: Local Feasibility Cost Share Agreement (LFCSA) between the State and Local Sponsor; refinement of Project Management Plan (scope, tasks, schedule, cost, management); US Army Corps of Engineers (USACE) F3 Milestone Document (without-project conditions: hydrology, hydraulics, geotechnical, economics, real estate, environmental/cultural resources, and GIS/mapping evaluations).

Schedule: LFCSA (May/June 2009); Project Management Plan refinement (June 2009); USACE F3 Milestone Document (September 2010).

Cost: Estimated upcoming year expenditures are \$4 million (\$2 million Federal, \$1 million State, \$1 million local agency). State funding is from Proposition 1E.

Performance Measure Development: N/A

Science Review or Science Understanding: N/A

Public Involvement and Outreach: Public Coordination/Scoping will be initiated. Possible alternatives and the study area will be further refined.

Linkages with Other Elements: Ecosystem restoration will be investigated as part of the study. The primary focus of the study will be flood risk management.

Environmental Compliance: Pending State execution of cost share agreement, a CEQA point of contact will be identified. Possibility of combining NEPA/CEQA document.

Environmental Justice: N/A

Tribal Activities: N/A

**North Delta Actions** – to improve flood protection and conveyance facilities, water quality, Delta fisheries, and avoid water supply disruptions, to increase the water supply reliability for the SWP and CVP and to enhance the Delta ecosystem.

**Activity: Delta Cross Channel Re-Operation and Through-Delta Facility (Delta Improvements Package)**

Expected Deliverables/Products: Field work for the Regional Salmon Outmigration Study was completed. Processing data for fish movement and hydrodynamics is subject to available funding.

Draft of Initial Alternatives Information Report was completed in 2008/09

Schedule: Due to the stop work order on State bond funded projects, work on the project has been put on hold. An alternate source of funding is being explored to fund the analysis of the fish movement and hydrodynamic data collected during the study. The schedule of this work will be determined upon obtaining the funding.

Cost: 4.8 mil (State), \$ 3.8 mil (SWP), \$0.4554 mil (federal);

Potential Problems: The contract with USGS is being amended to accommodate increased work resulting from the recommendations of the Independent Science Review Panel. Delays in contracting process can cause delays in processing of fish movement and hydrodynamics data. The analysis of the fish movement and hydrodynamic data cannot begin until additional funds are obtained.

Performance Measure Development: N/A

Science Review or Science Understanding: CALFED Science Program Peer Review, Interagency Ecological Program (IEP)

Public Involvement and Outreach: Several state, federal and local agencies were kept informed through the project website, fact sheet, interagency coordination meetings, and public news releases. Several interviews of key team members were broadcasted by the media.

Linkages to Other Elements: Water Quality Program and Environmental Restoration Program, IEP

Environmental Compliance: N/A

Environmental Justice: N/A

Tribal Activities: N/A

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**Activity: Frank's Tract (A project component of the CALFED Water Quality Program and Delta Improvements Package)**

Expected Deliverables/Products: Baseline data collection reports; preliminary geotechnical engineering report; alternatives analysis report; hydrodynamic and water quality modeling report, fisheries modeling report, Initial Alternatives Information Report, Plan Formulation Report, Feasibility Study, and EIS/EIR.

Schedule: Drafts of the geotechnical report, alternatives analysis report, fisheries modeling report, hydrodynamic and water quality modeling report and the Initial Alternatives Information Report are under review at this time. The Draft EIS/EIR is expected to be ready by spring 2010, subject to the availability of funding.

Cost: \$ 5 mil (State), \$ 2 mil (SWP), \$2 mil (Federal)

Potential Problems: The project schedule has been delayed due to the stop work order on State bond funded projects. Due to several ongoing fisheries issues in the Delta, the fisheries agencies have been unable to provide staff support to the Franks Tract Project. If this continues, the project schedule could be delayed further.

Performance Measure Development: Will be addressed in NEPA/CEQA documents.

Science Review or Science Understanding: Fisheries and Modeling Workgroups consisting of agency staff and consultants

Public Involvement and Outreach: Several meetings and workshops were held with landowners, reclamation districts, levee maintenance districts, and sanitary district in the Franks Tract Project area. As a part of NEPA/CEQA process, four scoping meetings were held to solicit input on the scope and contents of the environmental information in connection with the Franks Tract Project. Public outreach activities will continue through the completion of the project.

Linkages with Other Elements: Water Quality Program, Environmental Restoration Program, BDCP, and Delta Vision.

Environmental Compliance: Will be addressed in NEPA/CEQA documents.

Environmental Justice: Will be addressed in NEPA/CEQA documents.

Tribal Activities: Will be addressed in NEPA/CEQA documents.

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Activity: **North Delta Flood Control and Ecosystem Restoration Project**

Expected Deliverables/Products: North Delta Flood Control and Ecosystem Restoration Final EIR

Schedule: Final EIR- August 2009

Cost: \$0.47 mil (State – general fund) for DWR staff

Potential Problems: No funding is available after completion of the Final EIR document. No implementation funding for design and construction has yet been identified. No long-term landowner for Staten or McCormack-Williamson Tract has been identified. No federal lead agency has been identified. However, there has been some forward momentum in resolving these outstanding issues with the potential participation of the US Army Corps of Engineers through the CALFED Levee Stability Program.

Performance Measure Development: N/A

Science Review or Science Understanding: N/A

Public Involvement and Outreach: Final preferred alternative will be selected based on comment letters received during the public comment period and verbal comments provided at the public hearing held February 21, 2008. There have been multiple meetings of the North Delta Improvements Group and North Delta Agency Team over several years to develop the alternatives described in the Public Draft EIR. Participants in the EIR development process include DWR, DFG, State Lands Commission, Regional Water Quality Control Board, Delta Protection Commission, Reclamation Districts, US Fish and Wildlife Service and National Marine Fisheries Service.

Linkages with Other Elements: The development of North Delta Flood Control and Ecosystem Restoration Project is expected to result in ecosystem improvements in the Delta. The North Delta Flood Control and Ecosystem Restoration Project will have direct and indirect land-use implications for rural communities and agricultural landowners in the Delta. This projects' planning and development efforts will be

coordinated with the North Delta Implementation Group to integrate, to extent reasonably possible, a working landscape approach to implementation. The North Delta Flood Control and Ecosystem Restoration Project are expected to involve levee improvements in the Delta.

Environmental Compliance: - N/A

Environmental Justice: - N/A

Tribal Activities: N/A

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**Delta Mendota Canal/California Aqueduct (DMC/CA) Intertie Actions**– to consider the need for two specific SWP/CVP intertie projects which physically connect the SWP and CVP facilities.

Activity: **Delta Mendota Canal/California Aqueduct Intertie (Delta Improvements Package)**

Expected Deliverables/Products: Administrative Draft EIS and Public Draft EIS.

Schedule: The schedule for completion of planning and environmental compliance activities is to be determined based on OCAP concerns. Draft EIS (Spring 2009); Final EIS to be completed following issuance of the OCAP BOs.

Cost (Study): \$0.0

Potential Problems: Additional court injunction or action preventing construction. Coordination and integration with preparation of OCAP biological opinion is likely to continue through late-2009, which will delay construction.

Performance Measure Development: N/A

Science Review or Science Understanding: N/A

Performance Measures: There are no federal performance measures.

Public Involvement and Outreach: Preparation and release of public information notices, public review and comment on draft environmental documentation.

Linkages with Other Elements: No linkages have been identified.

Environmental Compliance: Preparation of EIS.

Environmental Justice: Will be addressed in the EIS.

Tribal activities: Will be addressed during environmental compliance.

Activity: **Clifton Court Forebay / Bill Jones (Tracy) Pumping Plant Intertie**

Work on this project has not yet commenced.

**Program To Meet Standards** – to develop and initiate implementation of a program to meet all existing water quality standards and objectives for which Central Valley Project has responsibility.

Activity: **DMC Recirculation Feasibility Study**

Expected Deliverables/Products: Feasibility Study and EIS/EIR in 2009.

Schedule: Draft EIS/EIR (Fall 2009); Final Feasibility Study and EIS/EIR (June

2010); ROD (August 2010).

Cost: \$0.25 million (Reclamation).

Potential Problems: The Westley Wasteway (one of the paths to the SJR from the DMC) is no longer connected to the SJR due to river migration over time. Total Suspended Solids (TSS) and Turbidity have been parameters of concern based upon the 2004 and 2007 Recirculation Pilot Studies.

Performance Measure Development: N/A

Science Review or Science Understanding: Addressed in NEPA/CEQA documents and Fisheries Technical Memorandum.

Public Involvement and Outreach: Conduct public stakeholder meetings for feedback regarding the proposed alternatives and modeling results for the study; regularly update the website.

Linkages to Other Elements: Water Quality Program, Ecosystem Restoration Program.

Environmental Compliance: Addressed in NEPA/CEQA documents.

Environmental Justice: Addressed in NEPA/CEQA documents.

Tribal Activities: Addressed in NEPA/CEQA documents.

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**Complementary Actions** - to consider actions that were identified in the Framework for Action but were not analyzed in the Final Programmatic EIR/EIS

Activity: **Temporary Barriers Project**

Expected Deliverables/Products: Install, operate, and remove barriers. Prepare regular reports.

Schedule: The operation of the HORB, MR, and DMC barriers, and a partial GLC barrier, typically begins on April 15 each year. The full operation of the GLC barrier begins on June 1. The removal of the spring HORB generally begins May 16 each year. The removal of the Ag barriers begins early November. The operation of the fall HORB begins mid-September and the removal begins early November. All barriers are completely removed from channels by November 30 each year. The spring HORB rock barrier was not installed in 2009 and instead a Non-Physical Barrier (NPB or "bubble barrier") is being tested in 2009. This NPB uses a bubble curtain, sound projectors, and strobe lights to deter outmigrating salmon smolts from straying down Old River on their way down the San Joaquin River toward the ocean.

Cost: \$6.6 mil (SWP)

Potential Problems: Naturally occurring high flows in the San Joaquin River that impact installation, and low summer flows that reduce water quality and may require barrier re-operations. Delta smelt abundance and salvage impact barrier installation and culvert operations, and may require removal as the most extreme measure.

Performance Measure Development: N/A

Science Review or Science Understanding: N/A

Public Involvement and Outreach: Coordinate with South Delta Water Agency, local landowners, and Reclamation Districts. Weekly updates emailed to stakeholders and provided on DWR web site during barrier operations.

Linkages with Other Elements: The Delta smelt Biological Opinion, court decisions, water quality, and river flows, governs the installation, operation, and removal of the barriers.

Environmental Compliance: - N/A

Environmental Justice: - N/A

Tribal Activities: N/A

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**Additional Actions Under Delta Improvement Package** - actions to increase water supply reliability, improve water quality, protect important fish species, and maintain the integrity of the levee systems in the Delta.

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Activity: **South Delta Hydrodynamics Study**

Expected Deliverables/Products: USGS is responsible for keeping these stations operational, including telemetry, obtaining measurements for calibration, developing and revising rating curves. However, this effort was suspended by the stop work order on State bond funded projects. The agreement is set to expire at the end of December 2009 and no alternate funding sources have been identified to continue this monitoring effort.

Schedule: Flow and water quality field monitoring would only continue through 12/09, if funding is identified.

Cost: This study is supported by State Bond funds (\$1.2 mil).

Potential Problems: Funding must be secured.

Performance Measure Development: N/A

Science Review or Science Understanding: N/A

Public Involvement and Outreach: N/A

Linkages with Other Elements: Interagency Ecological Program, Hydrodynamic study - Science program, and South Delta Fish Facility Improvements.

Environmental Compliance: N/A

Environmental Justice: N/A

Tribal Activities: N/A

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Activity: **Study of Delta Smelt and Fish Facilities**

(See Tracy Fish Test Facility)

Activity: **CCWD Alternative Intake Project (CALFED Water Quality Program and Delta Improvements Package)**

Expected Deliverables/Products: Construction has begun and will continue on the first of three phases with a gravel road and new setback levees surrounding the

new pumping plant site. The second phase, building the pumping plant intake structure, began August 1, 2008 and completion is expected in 2010.

Schedule: The schedule for completion of planning and environmental compliance activities was accomplished in May 2008 with signing of the ROD. The project is scheduled for construction activities through 2010.

Cost: Costs for this fiscal year are limited to Reclamation administrative costs necessary to resolve OCAP issues.

Potential Problems: Pumping will be regulated by OCAP 2008 export curtailments based on flow in Old and Middle River.

Performance Measure Development: N/A

Science Review or Science Understanding: N/A

Performance Measures: There are no federal performance measures.

Public Involvement and Outreach: There are no public involvement or outreach activities planned for this fiscal year.

Linkages to Other Elements: Water Quality Program

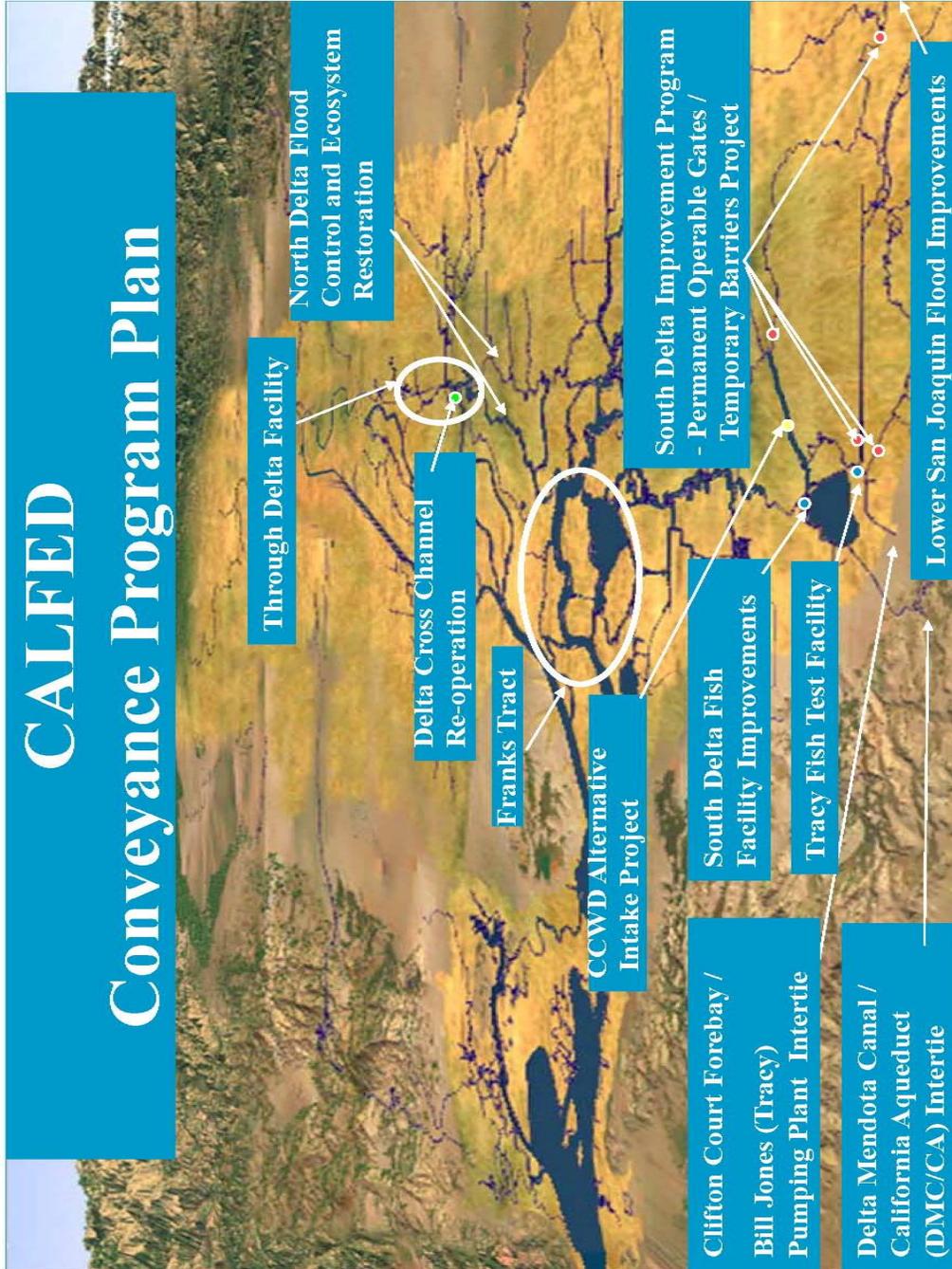
Environmental Compliance: ROD signed in May 2008

Environmental Justice: Addressed in the EIS/EIR.

Tribal activities: Addressed during environmental compliance.

**SWP/CWP Integration Plan** - the use of CVP stored water to meet SWP Delta water quality obligations and SWP export capability for CVP south-of-Delta deliveries.

(Included in Stage 2 of the South Delta Improvement Program.)



**Figure 1**