CALFED Bay-Delta Program

DRAFT FINAL
Conveyance Program
Program Plan Year 8
(State FY 2007-2008; Federal FY 2008)

Implementing Agencies:

California Department of Water Resources
U.S. Bureau of Reclamation

October 30, 2007

CALFED BAY-DELTA PROGRAM

Introduction

This Conveyance Program Plan identifies the CALFED Program activities that are scheduled to be completed during State Fiscal Year (FY) 2007-2008 and Federal FY 2008. The Plan also describes the accomplishments made during the previous year.

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

The Stage 1 strategy for the Conveyance Program is to develop a through-Delta conveyance alternative based on the existing configuration of the Delta with some modifications. As envisioned, moderate construction in the south and, possibly, the north Delta would occur within the first stage to improve conditions for the ecosystem and water management. The Stage 1 effort also includes studies and evaluations of major conveyance features to determine feasibility and, if feasible, allow for the projects to be ready for permitting and construction in later stages of the CALFED Program.

The programs, projects, and evaluations to meet three commitments identified in the CALFED Record of Decision (ROD) that are contained in the Conveyance Program include:

South Delta Actions

South Delta Improvements Program

Increasing the permitted State Water Project (SWP) Delta diversion limit to 8500 cubic feet per second (cfs) and installing permanent operable gates in the south Delta

Clifton Court Forebay (CCFB) Fish Screens/10,300 cfs

Constructing a new screened intake to CCFB and increasing the SWP diversion limit to 10,300 cfs

Tracy Fish Test Facility

Constructing a test facility at the Central Valley Project (CVP) Tracy pumping facilities

Lower San Joaquin Flood Improvements

Improving flood protection and ecosystem

North Delta Actions

Delta Cross Channel Re-Operation

Evaluate and implement operations to improve fish protection and improve water quality

Through-Delta Facility Evaluation

Evaluate the feasibility of a screened diversion up to 4,000 cfs from the Sacramento River to the central Delta

North Delta Flood Control and Ecosystem Restoration Improvement Program

Implement flood control improvements in a manner that benefits aquatic and terrestrial habitats, species, and ecological processes for the North Delta region

CVP/SWP Intertie Actions

Delta Mendota Canal/California Aqueduct Intertie

CVP/SWP Clifton Court Forebay Intertie

There are also several additional actions under the Conveyance Program which are also contained in the Delta Improvements Package (DIP). These actions and the program within which they are incorporated, shown in parenthesis, are:

- Study of South Delta hydrodynamics to better understand how flows in the Delta affect water quality and fish to determine areas for improvement (CCFB Fish Screen/10,300 cfs);
- South Delta Fish Facility Improvements and Collection, Handling, Transport and Release Study to evaluate and implement improvements in existing SWP and CVP fish salvaging facilities to increase the survival of Delta fish (CCFB Fish Screen/10,300 cfs);
- Improving the integration of the operation of the SWP and CVP by providing stored CVP water for SWP Delta water quality requirements and SWP Delta export capacity to pump CVP water for wildlife refuges (South Delta Improvements Program).

The "Complementary Actions" contained in the CALFED Program ROD for the Conveyance Program are the Temporary Barriers Project and the Sacramento and San Joaquin River Comprehensive Study. The Comprehensive Study was completed to an interim level with release of a December 2002 interim report. The report "sets the foundation for future modifications to the flood management system". The Temporary Barriers Project continues as an annual activity in the South Delta and is included in this program plan.

The following two programs are project components of the CALFED Water Quality Program Plan with linkages to the Conveyance Program.

Franks Tract

Evaluate flow and salinity in the Franks Tract region to improve fish protection and improve water quality

CCWD Alternative Intake Project

Improving and protecting the drinking water quality of existing Contra Costa Water District (CCWD) Delta diversions

The geographic distribution of these actions is presented in Figure 1.

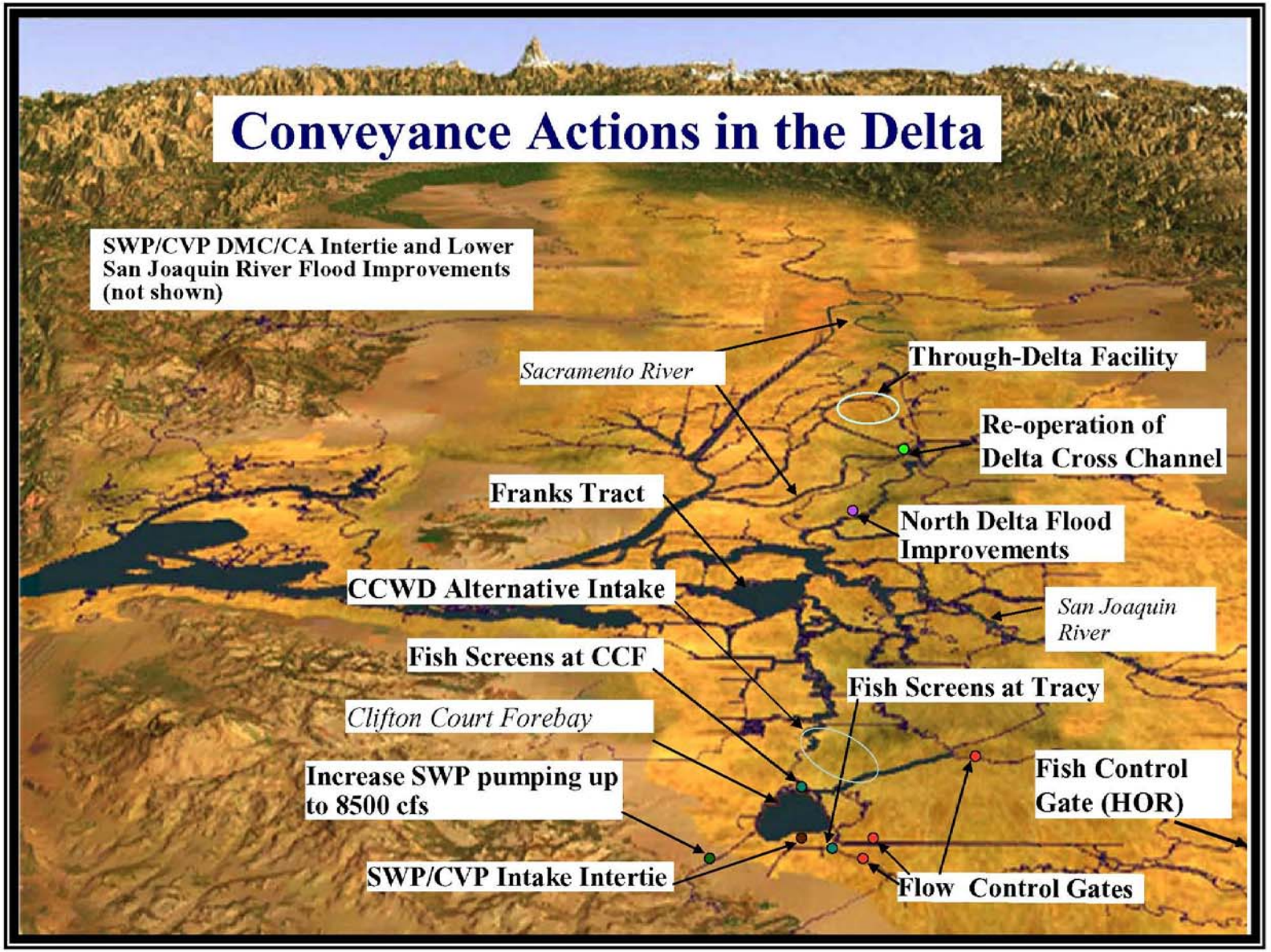

Conveyance Actions in the Delta
SWP/CVP DMC/CA Intertie and Lower San Joaquin River Flood Improvements (not shown)
Sacramento River
Through-Delta Facility
Re-operation of Delta Cross Channel
Franks Tract
North Delta Flood Improvements
CCWD Alternative Intake
San Joaquin River
Fish Screens at CCF
Fish Screens at Tracy
Clifton Court Forebay
Fish Control Gate (HOR)
Increase SWP pumping up to 8500 cfs
SWP/CVP Intake Intertie
Flow Control Gates

Figure 1

Priorities for FY 07-08

This section discusses the priorities for the Conveyance Program for FY 07-08. Factors considered in establishing priorities are the need for information or study to inform the through-Delta conveyance alternative, the potential of the activity to help meet CALFED Program objectives, the timing of the implementation of a proposed project, and the availability of funding for this year and future years.

Top priority actions for FY 07-08 are: obtaining permits to implement improvements in the south Delta for local water level, water quality and salmon protection (the South Delta Improvements Program); preparing environmental documentation for the Franks Tract project; coordinating preparations on a regional hydrodynamic and salmon outmigration study in FY 08-09 for the Delta Cross Channel and through-Delta Facility; and completing studies and study reports on improvements to the Delta fish facilities for Delta smelt survival (the Collection, Handling, Transport, and Release study).

The proposed project under the SDIP has a physical/structural component and an operational component. Implementing the operational component, which would increase the SWP Delta diversion limit, has been deferred indefinitely. The Department of Water Resources and the U.S. Bureau of Reclamation are, however, diligently seeking permits for the installation and operation of the physical/structural component. This component incorporates dredging, extension of agricultural intakes, and the installation of permanent operable gates at four locations in the south Delta. The permanent operable gates are needed to remove a threat of non-compliance with water quality standards in the south Delta. The related order, issued by the State Water Resources Control Board, requires DWR and Reclamation to comply by July 1, 2009. The Board has been notified that permits are being pursued and the earliest the gates will be operable is 2011. The Department has requested an extension of the compliance date from the Board.

Key elements of the through-Delta conveyance alternative are the Delta Cross Channel (DCC) Re-operation, the Through-Delta Facility (TDF) evaluation, and the Franks Tract Project. The Franks Tract Project is a project component of the CALFED Water Quality Program. Studies of proposed facilities or DCC operations have provided information regarding potential water quality improvements and effects upon flow and fish. They also have pointed out the need to understand regional flow, water quality and fish movement in the Delta. As a result, flow and salinity monitoring stations were installed in the north and central Delta to support a regional field study of flow, water quality, and fish movement.

Preliminary flow and water quality analyses will be completed in 2008 for comparison with modeling studies. In addition, information regarding water quality effects of proposed operations of the DCC, TDF, and Franks Tract (independently and in combination) will continue to be developed in FY 07-08. The simulations are designed to refine and expand upon the early assessments of the potential water quality improvements associated with these projects.

The Delta regional salmon outmigration study is planned for October 2008 through April 2009. Reports incorporating this information and making recommendations for the DCC and the TDF would be completed by Fall 2009. Activities in FY 07-08 include documentation of the fish behavior study at Clarksburg and development of a detailed workplan for the regional study. These activities and the monitoring and 2-D computer simulations are high-priority actions because of their importance to the recommendations on the DCC, TDF, and Franks Tract project.

Two separate Collection, Handling, Transportation and Release (CHTR) Studies at the State's fish protection facility are in progress. These studies are designed to identify improvements to the process of salvaging and releasing Delta smelt diverted into SWP and CVP facilities. This information is especially important given the population decline of Delta smelt. The first study, started in 2004, is scheduled for completion at the end of 2007. This study focuses on predation, acute mortality and injury, and stress. The second CHTR study, started in late 2006, is expected to be completed in 2009. This study, funded by Proposition 13 and State Water Project funds, is investigating fish loss in the release phase of the salvage process.

The Tracy Research and Improvements program is designed to assess and implement operational and structural improvements to the existing federal Tracy Fish Collection Facility (TFCF). This program is especially important given the population decline of the pelagic species, (e.g. Delta smelt, stripped bass, and threadfin shad), and the objectives of improving listed species protection at the federal export pumps (e.g. Chinook salmon, delta smelt, steelhead trout, and green sturgeon). In addition, the deferral of proposed fish screening facilities at the export facilities were due to the high cost of new screens and scientific questions about their efficacy by the South Delta Fish Facilities Forum in 2005 emphasizes the importance of this work. There are several activities planned for FY2008, including continuation of current TFCF efficiency studies for delta smelt, splittail, and green sturgeon, assessing holding tank stress on delta smelt and salmon, and improved management of debris and predators within the facility. Funding is provided through federal appropriations.

Accomplishments FY06-07

Conveyance Program Accomplishments in Year 7

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.

South Delta Improvement Program - 8,500 cfs and Permanent Operable Gates

Activity Undertaken: Preparation of Final EIS/EIR; certify the document. Complete the Action Specific Implementation Plan (ASIP). Initiate ESA/CESA consultation on the construction and operation of permanent operable gates in the South Delta.

Accomplishments: ESA Consultation was initiated on June 5, 2006. Final EIS/EIR was certified December 2006.

Unfinished portion of activity/rationale: ESA/CESA consultation must be finished before any other permits are granted. Stage 1 includes only the Physical/Structural component of SDIP. Once consultation is concluded, a record of decision and notice of determination will be issued. OCAP consultation is expected to continue through late-2008, so the project may be ready to construct by Spring 2009. Stage 2, implementing the 8,500 cfs portion of the project, has been delayed until more is known about the Delta Pelagic Organism Decline Resumption of SDIP would commence at some time in the future.

Clifton Court Fish Screens and 10,300 cfs:

Activity Undertaken: The effort to increase the export capability of Clifton Court Forebay to 10,300 cfs has been deferred until methods for successfully screening fish or reducing predation in the forebay are identified. A multi-year fish and hydrodynamic study in the south Delta includes: field studies to collect larval fish, zooplankton, water quality, and hydrodynamic data; diet analyses of key pelagic species; and exploratory salvage analyses. Also, the South Delta Fish Facilities Forum agreed to study ways to reduce fish predation in Clifton Court Forebay with the existing screening facilities. (This effort is referred to as the South Delta Fish Facilities Improvements in the Delta Improvements Package. One alternative to be considered is referred to as the "short circuit" alternative.)

Accomplishments: As part of the multi-year fish and hydrodynamic study in the South Delta, a preliminary report (IEP newsletter) was prepared on larval fish behaviors in the South Delta. The preliminary report (IEP newsletter) discussed decadal salvage patterns with regards to hydrodynamic conditions (i.e., E/I ratios) and night-day periods. Work on the steelhead predation study, as recommended by the South Delta Fish Facilities Forum is in progress. This pre-screening study included completion of data collection in order to calculate the pre-screen loss rate of steelhead in Clifton Court Forebay.

Unfinished portion of activity/rationale: Study actions are on schedule.

Tracy Fish Test Facility:

Activities Undertaken: On-going research activities to improve fish handling methods and operations of the Tracy fish Collection Facility (TFCF). Replace trashrack cleaner. Research new primary and secondary louvers and cleaners. Replace fish haul trucks and transfer bucket. Fill in the abandoned intake channel (AIC). Construct new research building. Renegotiate the Tracy Direct Loss Mitigation Agreement. Working on three fish studies as part of the CHTR Study; Predation, Delta Smelt Acute Mortality and Injury, and Delta Smelt Stress study. Also working on two elements of the New Technology portion of the CHTR Study.

Accomplishments: Conducted research activities on site and in lab related to delta smelt salvage factors, debris collection, predation control, fish hauling criteria, Chinook salmon handling stress, fish passage, hydraulic analysis, and water chemistry. Awarded contract for replacement of trashrack cleaner. Completed lab testing of prototype louver cleaners to be considered for use. Purchased new trucks. Awarded contract for fabrication of new truck tanks and transfer bucket. Publish various Tracy Research Volume Series. Updated Tracy Research website. Continue to negotiate a new Direct Loss Agreement and identify a source of funding. Department of Fish and Game and DWR studies are underway and have been collecting data. Data Collection for all CHTR studies to be completed by the mid-2008.

Unfinished portion of activity/rationale: Perform additional efficiency studies for delta smelt under different pumping scenarios. Consider additional debris handling improvement measures. Continue to track/analyze predator behavior and implement improved predator management measures. Continue to conduct fish passage trials with the mitten crab screen (Crabzilla) to demonstrate safe passage of fish. Conduct field tests to validate model for expanded loss of fish during louver cleaning operations. Demonstrate with field tests or previously collected blackfish data that the new transition boxes are as proficient as the old ones. Continue to consider alternative bypass operations to improve ability to meet D-1485 salvage criteria. Complete fish handling research and consider for implementation. Continue to collect water chemistry data for research purposes and external usage. Need to conduct on-site performance and fish passage analysis for new trash rack cleaner. Need to test new louver cleaner devices in the field. Need to monitor how well the new trucks and transfer bucket work after replacement and fine tune as necessary. Need to obtain funding to conduct feasibility study for construction of a new secondary louver and handling system. Need to complete negotiations and agree upon a source of funding for the Tracy Direct Loss Agreement. Need to continue to publish Tracy Research Volume Series and maintain Tracy Research website.

Lower San Joaquin Flood Improvements:

Activity Undertaken: In coordination with the USACE, preparation of a preliminary draft Project Management Plan (PMP) for the Lower San Joaquin River Feasibility Investigation (LSJRFI). Discussions with Stockton area study sponsors (San Joaquin County, cities of Stockton, Manteca, and Lathrop) to define study scope, costs and cost sharing, and actions to move forward with the study.

Accomplishments: Worked cooperatively with the USACE and the current potential local sponsors for the LSRFI to define issues and study requirements specific to the northern portion of the study area. Prepared draft letters to the South Delta Water Agency (representing 16 reclamation districts) and other river interests in the LSRFI study area to assess their desire to be a cost sharing partner in the study. Coordinated with Reclamation Board staff regarding ongoing study efforts and the need for the Board to provide an updated letter to the USACE indicating willingness for the State to Act as the non-federal study sponsor.

Unfinished portion of activity/rationale: Study work can not begin until a PMP is finalized and a feasibility cost sharing agreement (FCSA) between the State and USACE is executed and a local feasibility cost sharing agreement (LFCSA) between the State and local study partners is prepared and executed. Local study partners may proceed with certain study efforts (at their own risk – no guarantee of crediting) until the PMP and FCSA/LFCSA are completed and State and Federal funding becomes available.

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.

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

Activity Undertaken: Model studies were completed for TDF and DCC reoperation projects to evaluate their water quality benefits. A value engineering study was conducted for the TDF project. The study was conducted to determine the technical viability of this facility. A pilot level fish study as part of TDF/DCC and Franks Tract projects was conducted in the north and central Delta. The preparation of a report summarizing all the work done on Franks Tract, Thru Delta Facility and Delta Cross Channel projects was initiated. This report is to be submitted to the CALFED Program in support of the end of Stage 1 report. Maintenance of the flow and salinity monitoring stations installed in FY07 was conducted as needed.

Reclamation completed preparation of a Plan of Study in Spring 2007 for DCC Re-operation, TDF, and Franks Tract.

Accomplishments: The value engineering team recommended several new alternatives and ranked them based on costs and relative benefits. The pilot level fish study confirmed the feasibility of a regional salmon outmigration study and also provided necessary information for planning the study. The data collected from the flow and salinity monitoring stations was regularly posted on CDEC.

Unfinished portion of activity/rationale: Completion of alignment, engineering, and cost information remains to be completed.

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

Activity Undertaken: Model studies were completed for the four alternatives identified for the Franks Tract Project (FTP) to evaluate their water quality benefits. Conceptual designs for all four alternatives were prepared. A value engineering study evaluating those alternatives was conducted. A pilot level fish study as part of TDF/DCC and Franks Tract project was conducted in the north and central Delta. The preparation of a Summary Report summarizing all the work done on Franks Tract, Thru Delta Facility and Delta Cross Channel projects was initiated. This report is to be submitted to the CALFED Program in support of the end of Stage 1 report. Maintenance of the flow and salinity monitoring stations installed in FY07 was conducted as needed.

Reclamation completed preparation of a Plan of Study in Spring 2007 for DCC Re-operation, TDF, and Franks Tract.

Accomplishments: The value engineering study converged to two preferred alternatives for further evaluation. The pilot level fish study provided useful information that is being used in the planning of a Delta regional salmon outmigration study. The data collected from the flow and salinity monitoring stations was regularly posted on CDEC.

Unfinished portion of activity/rationale: The preparation of Summary Report will be completed in FY 08.

North Delta Flood Control and Ecosystem Restoration Project:

Activity Undertaken: Preparation of North Delta Flood Control and Ecosystem Restoration EIR.

Accomplishments: Completed the Administrative Draft on June, 2006, and now finalizing the internal review of the Public Draft prior to public release. Completed rough benefit-cost analysis and initiated refined benefit-cost analysis to be completed by December 2006. Completed Grizzly Slough element refinement including science panel review and hydraulic modeling studies. Prepared and submitted proposal for USACE CALFED Act funding. Completed sediment dynamics modeling. Anticipate completion of Public Draft EIR in fall 2007 and identification of long-term owner and implementation funding source in the second half of 2008.

Unfinished portion of activity/rationale: Implementation funding and long-term owner for North Delta properties not yet identified. DWR staff recommends that if a long-term owner and implementation funding is not identified by the time the Public Draft review is completed and the preferred alternative is chosen, DWR resources be diverted to other activities until this project can go forward to completion.

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.

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

Activity Undertaken: USBR initiated preparation of full Environmental Impact Statement (EIS)in August 2006.

Accomplishments: The USBR (Federal lead agency) issued a FONSI and the SLDMWA (State lead agency) issued a NOD, issued final design documentation, completed competitive bidding for construction and awarded a contract for construction. DWR and the USBR negotiated principles of agreement for construction of the intertie. The FONSI was subsequently withdrawn to solicit further comment from interested parties and the public regarding the proposed project and the construction contract was terminated. Preparation of an EIS was initiated.

Unfinished portion of activity/rationale: Construction delayed. USBR withdrew the FONSI March 2006 and cancelled the construction contract pending preparation and approval of a full EIS, including coordination with preparation of the Operations Criteria and Plan (OCAP) biological opinions.

Clifton Court Forebay/Tracy Pumping Plant Intertie:

Activity Undertaken: Work on this project has not yet commenced.

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

Temporary Barriers Project:

Activity Undertaken: Coordinate with the VAMP group for the VAMP 2007 experiment. Prepare for the TBP 2007 Installation. Coordinate with south Delta farmers/diverters to monitor past dredged sites, identify potential needs for portable pumps or potential dredging sites. Monitor channel bathymetry of dredged sites.

Accomplishments: Three agricultural barriers were successfully installed in the south Delta. The spring Head of Old River Barrier was installed in April 2007 along with the agricultural barriers. The fall Head of Old River barrier was installed in 2007 per DFG request. Portable pumps were not needed in 2007 as flows were high during the summer and water levels remained adequate for agricultural diversions, both at the Tom Paine Slough and elsewhere in the south Delta.

Unfinished portion of activity/rationale: Continue the bathymetry monitoring of the dredged sites, and work with south Delta diverters for potential new dredging sites as needed.

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

Study of South Delta Hydrodynamics, Water Quality, and Fish:

(See Clifton Court Fish Screens and 10,300 cfs)

South Delta Fish Facilities Improvements

(See Clifton Court Fish Screens and 10,300 cfs)

Study of Delta Smelt and Fish Facilities:

(See Tracy Fish Test Facility)

CCWD Alternative Intake Project – water quality project to protect and improve drinking water quality by relocating a portion of CCWD's existing diversions to a new intake location in the Delta with better source water quality. This project is included in the CALFED Water Quality Program.

Activity Undertaken: Preparation of draft EIR/EIS; circulation of document for public review and comment. Complete the draft ASIP and circulate.

Accomplishments: Completed Draft EIR/EIS and ASIP and circulated environmental documents in May 2006. Comment period closed in late June 2006. Responses to comments and Final EIR/EIS completed in October 2006. EIR Certified by CCWD in November 2006. Final Design initiated.

Unfinished portion of activity/rationale: The project is on schedule.

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.

(Included in the South Delta Improvement Program)

Activity FY 07-08

Conveyance Program Activities Planned for Year 8

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.

South Delta Improvement Program - 8,500 cfs and Permanent Operable Gates:

Activity: Reinitiate consultation on operations of the permanent operable gates through the OCAP consultation process. Concurrent to consultation on operations, an Action Specific Implementation Plan will be submitted for the construction related impacts.

Expected Deliverables/Products: Revised Action Specific Implementation Plan (ASIP) for the construction related impacts of SDIP. On a separate action, the OCAP Biological Assessment which will include operations of the permanent operable gates will also be completed.

Schedule: DWR Submits ASIP (3/08); DWR adopts project, files NOD (TBD); Reclamation issues ROD (TBD); Advertise for construction/supply contract (TBD); Begin gate construction (TBD).

Cost: SDIP staff, final design, and monitoring $3 mil (SWP)

Public Involvement and Outreach: The status of the permitting for the permanent operable gates will be posted on the web. Key stakeholders are notified of the status of the project by receiving copies of the quarterly report required by an order of the State Water Resources Control Board.

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

Potential Problems: Acquiring all approvals to allow construction of gates components to begin very early in 2009 and gates to be constructed and operable by Spring 2011 is uncertain. Meeting this schedule is very important to the reliable operation of the SWP and CVP. The SWQCB has issued a Cease and Desist Order to DWR and the USBR to remove a threat of violating south Delta water quality standards by July 2009. The permanent operable gates are required to improve south Delta water quality and remove the Cease and Desist Order. The Department has requested an extension on the compliance deadline.

Clifton Court Fish Screens and 10,300 cfs:

Activity: Continue South Delta Hydrodynamics, Water Quality and Fish study, including data and laboratory analyses and report and manuscript preparation. Finish report on pilot-scale studies, including data analysis. Continue data analysis and report writing for the full-scale study evaluating the pre-screen losses of juvenile steelhead in Clifton Court Forebay.

Expected Deliverables/Products: Two peer-reviewed journal articles discussing salvage and entrainment of fishes in the south Delta. A final DWR Report and one peer-reviewed journal article discussing pre-screen losses of juvenile steelhead in Clifton Court Forebay.

Schedule: Complete data and laboratory analyses and preparation of report and manuscripts. Complete full-scale study including data collection, data analyses, and preparation of report by the end of 2008.

Cost: Hydrodynamic study: $0.5 mil (State) for data analysis and report write-up. Predation study: $1.3 mil (State) for data collection, data analysis, and report write-up.

Public Involvement and Outreach: Continue to present data at local conferences, IEP Asilomar Conference, EWA, CALFED, and AFS Cal-Neva meeting (predation study).

Linkages: Hydrodynamic study - Science program. Predation study - 2004 NOAA Fisheries Biological Opinion and South Delta Permanent Gates.

Potential Problems: Hydrodynamic study - Funding to complete complimentary field work and analyses for USGS (hydrodynamic component). Predation study - Contracts to provide support staff from other agencies. We need to secure funding for investigation and development of alternative measures to reduce the predation on steelhead in Clifton Court Forebay.

Tracy Fish Test Facility:

Activities: Continue research activities to further analyze the existing facility at current levels of protection and improve screening efficiency. Award contract for new primary and secondary louvers and cleaning systems. Conduct feasibility study of new secondary louver and handling system. Complete construction of new research building. Award contract for development of land (AIC). Execute new Tracy Direct Loss Agreement (TDLA). Publish Tracy Research Volume Series and maintain Tracy Research website. The Department of Fish and Game will complete data collection, analyze data and write reports on the three collection, handling, transportation and release (CHTR) studies. This will include the CHTR Predation Study, Delta Smelt Acute Mortality and Injury, and the Delta Smelt Stress Study. The CHTR New Technologies Evaluation program will continue to collect data on Elements 2 and 3.

Expected Deliverables/Products: Continuation/ completion of various research efforts related to salvage improvement of Delta smelt, Chinook salmon, striped bass, and other listed/POD species. Publish completed study efforts in the Tracy Research Volume Series Reports. Begin construction of new primary and secondary louver cleaning systems. Complete feasibility study for construction of a new secondary screening and handling system. Proceed with filling in the abandoned intake channel (AIC). Implement operational guidelines and make payments to the state (DFG) for loss of fish at the Tracy Fish Collection Facility (TFCF)/ Tracy Pumping Plant (TPP). Updated Tracy Research website. The Department of Fish and Game will provide Final Reports on the Predation Study, Delta Smelt Acute Mortality and Injury and the Delta Smelt Stress Study. DWR will develop a plan and resource requirements to determine what information is needed to address possible improvement alternatives as part of the South Delta Fish Facilities Improvements project.

Schedule: Conduct research activities both on site and in the lab during course of the federal fiscal year. Begin construction of new louver cleaning systems sometime during the federal fiscal year. Complete feasibility study of new secondary louver and handling system sometime during federal fiscal year. Proceed with contract to fill in AIC sometime during federal fiscal year. Make payments to state sometime during the fiscal year towards TDLA. Tracy Volume Series reports to be published and website maintained during the course of the fiscal year. The Department of Fish and Game will complete all data collection for the CHTR studies by January 2008 and provide Final Reports by June 30, 2009. The CHTR New technologies will continue data collection throughout the year for both elements 2 and 3.

Cost: $2.083 mil (federal – in Presidents Budget) to continue/complete studies on site and in the lab in Denver. $2.2 mil (State) funding for CHTR studies. $0.24 mil to conduct feasibility study for construction of a new secondary screening and handling system at the TFCF (no fund source identified).

Public Involvement and Outreach: Conduct monthly Tracy Technical Advisory Team meetings. Update Tracy Research website information. Publish Tracy Research Volume Series.

Linkages. Ecosystem restoration (TDLA). The CHTR studies are a multi-agency program and under review by the IEP program.

Potential Problems: Federal and State funding for feasibility study and construction of a new secondary system and holding facilities at the TFCF. Funding for a new Tracy Direct Loss Agreement.

Lower San Joaquin Flood Improvements:

Activity: If the Program Management Plan (PMP) is completed, and the Feasibility Cost Sharing Agreement (FCSA) and Local Feasibility Cost Sharing Agreement (LFCSA) are executed, and funding becomes available, the LSJRFI will be initiated.

Expected Deliverables/Products: PMP, cost sharing agreements, and initial study deliverables (problem identification, study objectives, and related documentation).

Schedule: PMP will not likely be completed until early calendar year 2008 with cost sharing documents executed at about that time. The LSJRFI will take about 3 years to compete.

Cost: Total study cost could be between $6 to $7 million ($3 to $3.5 federal and an equal amount non-federal). State would be responsible for half the non-federal costs. Most if not all the non-federal cost would be as in-kind services Upcoming years cost could, depending on funds availability, amount to about $2 mil ($1 mil federal; $1 mil non-federal with $0.5 State and $0.5 local)

Public Involvement and Outreach: Local consensus meetings with concerned stakeholders to develop study priorities and needs.

Linkages: Environmental Restoration and Recreation.

Potential Problems: Agreement on study scope by local interests. Without reprogramming, federal funds likely limited to about $0.3 million in federal FY 2008. No State funding sources confirmed to date. Efforts are continuing related to floodSAFE.

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.

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

Activity:

Conduct model studies to evaluate water quality benefits for various TDF alternatives and the DCC reoperation scenarios. Channel modifications to complement the TDF/DCC projects will be considered. Complete analysis of the 2006 pilot fish study and use results to plan the regional salmon migration study to be conducted in FY 08-09. Create a partnership with the fisheries agencies in planning and conducting the fish study. Support development of a 2D particle tracking model to be used in the development of project operations. Complete the Summary Report to be submitted to the CALFED Program in support of the end of Stage 1 report. Complete preparation of the Delta regional salmon outmigration study plan.

Expected Deliverables/Products:

1. A report summarizing all the work done on TDF and DCC projects will be prepared for submittal to the CALFED Program in support of the end of Stage 1 report. (October 07)
2. Water quality modeling results for various TDF and DCC re-operation alternatives (July 07 – June 08)
3. Independent Science Review of Delta Regional salmon outmigration study plan (December 07 - February 08)
4. Delta Regional salmon outmigration study plan (July 07 - February 08)
5. Purchase necessary equipment for the fish study (July 07 - November 08)
6. Fisheries literature review related to TDF and DCC reoperation projects (April 08)
7. Analysis of hydroacoustic data for migratory fish movement in Sacramento River bend at Clarksburg (June 08)

Schedule: See above.

Cost: TDF/DCC modeling work and fish study $2.0 mil (State), $ 2.0 mil (SWP), $0.4 mil (federal);

Public Involvement and Outreach: Conduct public and technical advisory meetings to obtain feedback regarding the Delta regional salmon outmigration study.

Linkages: Water Quality Program and Environmental Restoration Program.

Potential Problems: The Delta regional salmon outmigration study, planned to be done in fall of 2008, is dependent upon coordination of DCC and project operations.

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

Activity: Initiate preparation of EIR/EIS for FTP. Perform model studies to using extended years of data, and develop operations of FTP in coordination with fisheries agencies, SWP and water contractors to meet multiple objectives. Support development of a 2D particle tracking model to be used in the development of project operations. Develop 10% level designs and cost estimates for the two FTP alternatives: Operable barrier on West False River, and operable barrier on Three Mile Slough. Prepare preliminary geotechnical engineering report based on available geological information. Continue maintenance of flow and salinity monitoring stations. Complete the Summary Report to be submitted to the CALFED Program in support of the end of Stage 1 report. Complete preparation of the Delta regional salmon outmigration study plan.

Expected Deliverables/Products:

1. Fisheries literature review related to Franks Tract project (Nov 07)
2. 10% level designs of FTP alternatives (June 08)
3. Preliminary Geotechnical Report (June 08)
4. Public Participation Plan for development of EIR/EIS (March 08)
5. Delta Regional salmon outmigration study plan (February 08)
6. Independent Science Review of Delta regional salmon outmigration study plan (December 07 - February 08)
7. Develop project operations (Continue to FY 09)
8. Alternatives Analysis Report (Aug 08)
9. Baseline data collection reports (July FY 08)
10. Public Draft EIR/EIS (July 09)

Schedule: See above.

Cost: $ 3.3 mil (State), $ 0.9 mil (SWP)

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: Water Quality Program and Environmental Restoration Program.

Potential Problems: Ongoing coordination and preparation of OCAP biological opinion may continue through late-2008, potentially delaying the FTP.

North Delta Flood Control and Ecosystem Restoration Project:

Activity: Complete North Delta Flood Control and Ecosystem Restoration Public Draft EIR. Secure implementation funding and long-term owner for McCormack-Williamson Tract and Staten Island properties.

Expected Deliverables/Products: Public Draft EIR; Final Draft EIR

Schedule: Public Draft EIR- December 2007; Final Draft EIR- May 2008

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

Public Involvement and Outreach: Participation is achieved through meetings of the North Delta Improvements Group, North Delta Agency Team and the Mokelumne-Cosumnes Watershed Alliance. Participants include DWR, DFG, State Lands Commission, RWQCB, Delta Protection Commission, Reclamation Districts, USFWS and National Marine Fisheries Service.

Linkages: The development of North Delta Flood Control and Ecosystem Restoration Project is expected to result in ecosystem improvements in the Delta. This project will be coordinated with the Ecosystem Restoration Program. 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 is expected to involve levee improvements in the Delta and will involve coordination with the Levee System Integrity Program.

Potential Problems: No funding is available for completion of the EIR beyond completion of Public Draft environmental document. No implementation funding for design and construction has been secured. No long-term landowner for Staten or McCormack-Williamson Tract has been identified. No federal lead agency has been identified. The lack of inclusion of North Delta Flood Control and Ecosystem Restoration Project in the CBDA 10-yr action plan has been perceived by many as general loss of CALFED support.

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.

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

Activity: Complete full Environmental Impact Statement (EIS), re-solicit construction contracts, and initiate construction.

Expected Deliverables/Products: Public draft and final EIS document.

Schedule: Final EIS and ROD (Spring 2009), and award contracts (Summer 2009).

Cost: $29 mil ($25 mil (CVP), $1.29 mil federal, $2.7 mil [No funding source at this time]).

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

Linkages: No linkages have been identified.

Potential Problems: Additional court injunction or action preventing construction. Coordination and integration with preparation of OCAP biological opinion is likely to continue through late-2008, delaying construction until Summer 2009, or later.

Clifton Court Forebay / Tracy Pumping Plant Intertie:

Activity: Work on this project has not yet commenced.

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

Temporary Barriers Project:

Activity: Continue the south Delta temporary barriers installation to improve water levels for south Delta diverters. Coordinate with various regulatory agencies and south Delta diverters to resolve any water level and water quality issues that might arise.

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. There is a strong possibility that the spring HORB will not be installed in 2008 or future years due to recent court decisions regarding delta smelt protections.

Cost: $6.6 mil (SWP)

Public Involvement and Outreach: Coordinate with South Delta Water Agency, local landowners, and Reclamation Districts.

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

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.

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

Study of South Delta Hydrodynamics, Water Quality, and Fish:

(See Clifton Court Fish Screens and 10,300 cfs)

Study of Delta Smelt and Fish Facilities:

(See Tracy Test Facility)

CCWD Alternative Intake Project (CALFED Water Quality Program and Delta Improvements Package):
Activity: Secure appropriate permits (water rights modification, biological opinions, etc.). Preparation of special study by Reclamation to determine federal interest in project. Initiate land acquisition. Complete final design.

Expected Deliverables/Products: 404 Permit, 401 Certification, Section 10 permit, biological opinions, amended water rights, other permits as appropriate (Section 106 concurrence, RWQCB dewatering permit, DFG streambed alteration, SJVAPCD permit, etc.)

Schedule: Complete full design Fall 2007. Begin construction Spring 2008. Project online in 2010.

Cost: $100 mil (includes planning, design and construction): $2.5 mil (federal pending determination of federal interest); $47.5 mil (CCWD); $50 mil (State grant funds being sought by CCWD)

Public Involvement and Outreach: Project outreach has been an important part of the AIP and includes public hearings, a project website that has been maintained throughout project, and ongoing meetings and briefings with stakeholders including the affected landowner, state water contractors, regulatory agencies, fisheries agencies, and other interested parties.

Linkages: The federal CALFED authorization states the AIP should move forward on a schedule consistent with the implementation of permanent operable gates. Both projects now have certified EIRs and are acquiring necessary permits.

Potential Problems: The schedule for the permanent operable gates has been delayed pending consultation under OCAP. OCAP consultation may also delay AIP project permits. Funding.

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 the South Delta Improvement Program.)

Schedule

Conveyance Program Schedule – Program Plan Year 8

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.

South Delta Improvement Program - 8,500 cfs and Permanent Operable Gates:

DWR certifies Stage 1 EIR (12/06), adopt project and file NOD (TBD)
USBR issues ROD (TBD)
Permanent operable gate construction (TBD))
Begin Stage 2 environmental evaluation (TBD)
Complete Stage 2 environmental evaluation and permitting (TBD)

Clifton Court Fish Screens and 10,300 cfs:

Study of South Delta Hydrodynamics, Water Quality, and Fish:
Conduct spring field sampling in South Delta, process samples, examine salvage databases, prepare prelim reports (FY2008)
Complete lab analyses, analyze all data sets, including hydrodynamic data provided by USGS, incorporate field data into 3-D model, prepare report and manuscript (FY2008)

Refine 3-D model, review and revise manuscript, make result presentations (FY2008)

Tracy Fish Test Facility:

Continue research activities to further analyze existing facility and improve screening efficiency, field test new trashrack cleaner, and award contracts for new primary and secondary louvers and cleaning system FY 2008
Construct new research building FY2007/2008
Begin construction of Development of Land FY2008
Execute Tracy Direct Loss Agreement FY2008
Complete CHTR data collection and analyses January 2008
Submit final CHTR reports June 2009
Construct new secondary system FY2009/10

Lower San Joaquin Flood Improvements:

If funding is available, complete program management plan (PMP), feasibility cost share agreement (FCSA) and local feasibility cost sharing agreement (LFCSA) (FY2007/2008)
Conduct consensus meetings and development of project plan (FY2007-2008)

Conduct Lower San Joaquin River Feasibility Investigation with local study sponsors (FY2008-2011)

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.

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

1. A report summarizing all the work done on TDF and DCC projects will be prepared for submittal to the CALFED Program in support of the end of Stage 1 report. (November 07)
2. Water quality modeling results for various TDF and DCC re-operation alternatives (July 07 – June 08)
3. Delta Regional salmon outmigration study plan (July 07 - February 08)
4. Purchase necessary equipment for the fish study (July 07 - November 08)
5. Fisheries literature review related to TDF and DCC reoperation projects (April 08)

Franks Tract Project (CALFED Water Quality Program and Delta Improvements Package):

1. Delta Regional salmon outmigration study plan (February 08)
2. Delta Regional salmon outmigration study (November 08 - March 09)
3. 10% level designs of FTP alternatives (November 07- June 08)
4. Preliminary Geotechnical Report (January-June 08)
5. Public Participation Plan for development of EIR/EIS (January 08-March 08)
6. Develop project operations (November 07 to Dec 08)
7. Alternatives Analysis Report (January 08 - August 08)
8. Baseline data collection reports (January 08 - August 08)
9. Public Draft EIR/EIS (January 08- July 09)
10. Permits for FTP (March 08 - March 10)
11. Final Design (July 09 – July 10)
12. Construction of FTP (2011-2012)

North Delta Flood Control and Ecosystem Restoration Project:

Administrative Draft EIR- June 2006;
Public Draft EIR without preferred alternative- December 2007;
Select Preferred Alternative and identify longterm owner – March 2008
Final EIR- May 2008 (Depending on funding and if preferred alternative selected and longterm owner identified)

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.

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

Final EIS (TBD)
ROD (TBD)
Re-solicit construction contract (TBD)
Initiate construction September (TBD), complete Intertie construction (TBD).

Clifton Court Forebay/Tracy Pumping Plant Intertie:

Work on this project has not yet commenced.

Complementary Actions

Temporary Barriers Project:

Install and operate the Head of Old River Barrier (HORB) (if allowed), Middle River (MR), and Old River at Tracy (DMC) barriers April 15 each year through 2010.
Remove HORB May 16 each year.
Install a partial (Grant Line Canal) GLC barrier April 15 and fully operate the GLC barrier June 1 each year.
Install fall HORB in mid-September each year.
Remove the MR and DMC Ag barriers and fall HORB beginning early November and completed November 30 each year.

Additional Actions Under Delta Improvement Package – objectives that were not analyzed in the final Programmatic EIS/EIR.

Study of South Delta Hydrodynamics, Water Quality, and Fish:

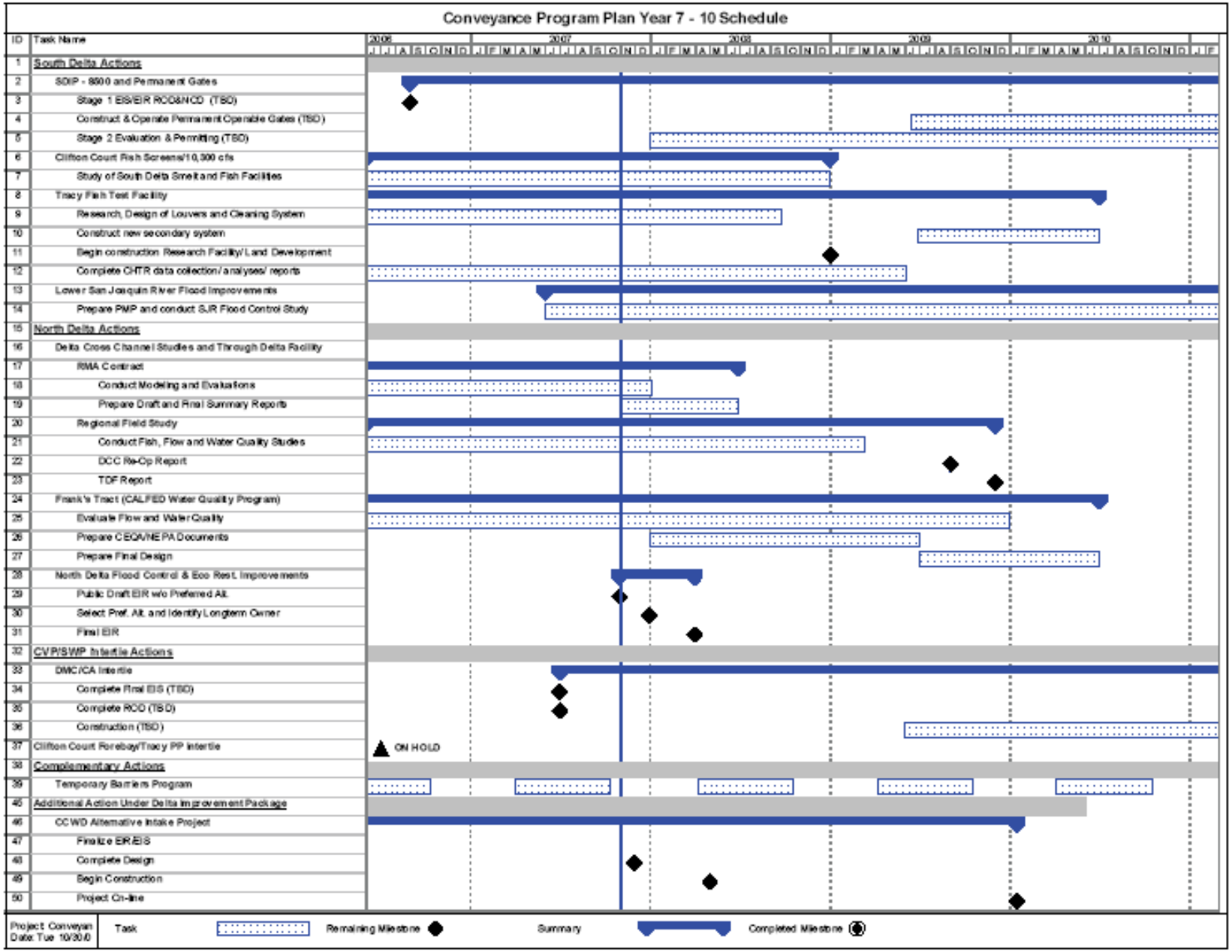
(See Tracy Fish Test Facility)

Study of Delta Smelt and Fish Facilities

(See Clifton Court Fish Screens and 10,300 cfs)

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

Finalize EIR/EIS Fall 2006 - completed
Complete Full Design Fall 2007
Begin Construction Spring 2008
Project Online as early as 2010


Conveyance Program Plan Year 7 - 10 Schedule
ID
Task Name
2006
2007
2008
2009
2010
1 South Delta Actions
2 SDIP - 8500 and Permanent Gates
3 Stage 1 EIS/EIR ROD&NOD (TSD)
4 Construct & Operate Permanent Operable Gates (TSD)
5 Stage 2 Evaluation & Permitting (TSD)
6 Clifton Court Fish Screens/10,300 cfs
7 Study of South Delta Smelt and Fish Facilities
8 Tracy Fish Test Facility
9 Research, Design of Louvers and Cleaning System
10 Construct new secondary system
11 Begin construction Research Facility/ Land Development
12 Complete CHTR data collection / analyses/ reports
13 Lower San Joaquin River Flood Improvements
14 Prepare PMP and conduct SJR Flood Control Study
15 North Delta Actions
16 Delta Cross Channel Studies and Through Delta Facility
17 RMA Contract
18 Conduct Modeling and Evaluations
19 Prepare Draft and Final Summary Reports
20 Regional Field Study
21 Conduct Fish, Flow and Water Quality Studies
22 DCC Re-Op Report
23 TDF Report
24 Frank's Tract (CALFED Water Quality Program)
25 Evaluate Flow and Water Quality
26 Prepare CEQA/NEPA Documents
27 Prepare Final Design
28 North Delta Flood Control & Eco Rest. Improvements
29 Public Draft EIR w/o Preferred Alt.
30 Select Pref. Alt. and Identify Longterm Owner
31 Final EIR
32 CVP/SWP Intertie Actions
33 DMC/CA Intertie
34 Complete Final EIS (TSD)
35 Complete ROD (TSD)
36 Construction (TSD)
37 Clifton Court Forebay/Tracy PP Intertie
ON HOLD
38 Complementary Actions
39 Temporary Barriers Program
45 Additional Action Under Delta Improvement Package
46 CCWD Alternative Intake Project
47 Finalize EIR/EIS
48 Complete Design
49 Begin Construction
50 Project On-line
Project: Conveyan
Date: Tue 10/30/0
Task
Remaining Milestone
Summary
Completed Milestone

Budget

Conveyance	Plan Year 8 ($ in millions, rounded to nearest $0.1mil)
State [1]	$9.8
Federal [2]	$6.3
Water User [3]	$85.5
Available Funding Total [4]	$100.6
Projected Needs Estimate [5]	$155.5
Original ROD Estimate (Aug, 2000) [6]	n/a
Notes:	
[1] CCFS 10300cfs-$1.8 mil; TFTF $2.2 mil; DCC Re-Op and TDF - $2.0 mil, Franks Tract-$3.3 mil; ND FC/ERIP-$0.5 mil	
[2]TFTF-$2.1 mil; DCC/TDF-$0.4 mil(USBR); DMC/CA Intertie-$1.29 mil(USBR); CCWD AIP-$2.5 mil(USBR)	
[3] SDIP-$3 mil (SWP); DMC/CA Intertie-$25 mil (CVP); Temporary Barriers-$6.6 mil (SWP); CCWD AIP - $48 mil (CCWD); Franks Tract-$0.9 mil(SWP) ; TDF/DCC – $2.0 mil (SWP)	
[4] SDIP-$3 mil; CCFS 10300cfs-$1.8 mil; DCC Re-Op, TDF and Franks Tract-$8.6 mil; TFTF-$4.3 mil; DMC/CA Intertie $26.29 mil; Temporary Barriers-$6.6 mil (SWP); CCWD AIP-$50.5 mil; ND FC/ERIP-$0.5 mil	
[5] TFTF-$0.24 mil; DMC/CA Intertie-$2.7 mil; Lower San Joaquin-$1.0 mil(USACE), $1.0 mil (State/Local); and CCWD AIP - $50 mil Added to available funding Total ($100.6 mil)	
[6] Original ROD Estimates only available for years 1-7 (Stage 1) from the Record of Decision (Aug 2000).	

Acronyms:
AIP - Alternative Intake Project
CCFS – Clifton Court Fish Screens
CCWD – Contra Costa Water District
CVP – Central Valley Project
DCC – Delta Cross Channel
DMC/CA – Delta Mendota Canal/California Aqueduct
ND FC/ERIP – North Delta Flood Control / Ecosystem Restoration Improvements Program
ROD – Record of Decision
SDIP – South Delta Improvement Program
SWP – State Water Project
TDF – Through Delta Facility
TFTF – Tracy Fish Test Facility
USACE – United States Army Corps of Engineers
USBR – United States Bureau of Reclamation

Conveyance	Plan Year 8 ($ in millions, rounded to nearest $0.1mil)
South Delta Actions	
South Delta Improvement Program (SDIP) 8,500 cfs - Permanent Operable Barriers	$3.0
Clifton Court Fish Screens / 10,300 cfs	$1.8
Tracy Fish Test Facility (TFTF)	$4.3
Lower San Joaquin Flood Improvements	$0.0
North Delta Actions	
Delta Cross Channel Re-operation and Through Delta Facility ($4.4M); Franks Tract ($4.2 M)	$8.6
North Delta Flood Control and Ecosystem Restoration Improvement Program (ND FC ERIP)	$0.5
Delta Mendota Canal/California Aqueduct (DMC/CA) Intertie Actions	
Delta Mendota Canal / California Aqueduct Intertie	$26.3
CVP/SWP Clifton Court Forebay Intertie	--
Complementary Actions	
Temporary Barriers	$6.6
Additional Actions Under Delta Improvement Package	
Study of South Delta Hydrodynamics, Water Quality and Fish (see Clifton Court Fish Screens / 10,300 cfs)	-
Study of Delta Smelt and Fish Facilities (see TFTF)	-
Contra Costa Water District Alternative Intake Project (CCWD AIP)	$50.5
State Water Project/Central Valley Project Integration Plan	
State Water Project/Central Valley Project Integration Plan (see SDIP)	-
Available Funding Total	$100.6
Projected Needs Estimate [1]	$155.5
Original ROD Estimate (Aug, 2000) [2]	n/a
Notes:	
[1] TFTF-$0.24 mil; DMC/CA Intertie-$2.7 mil; Lower San Joaquin-$1.0 mil(USACE), $1.0 mil (State/Local); and CCWD AIP - $50 mil Added to available funding Total ($100.6 mil) [2] Original ROD Estimates only available for years 1-7 (Stage 1) from the Record of Decision (Aug 2000).	