

California Bay-Delta Program

Draft Conveyance Program Multi-Year Program Plan (Years 6-9)

(State FYs 2005-06 to 2008-09; Federal FYs 2006 to 2009)

Implementing Agencies:

California State Department of Water Resources

United States Bureau of Reclamation

United States Army Corps of Engineers

April 6, 2005 Draft



Goals, Objectives, Targets and Performance Measures

Goals and Objectives:

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 drinking water quality
- Complement Delta ecosystem

CALFED's basic strategy for the Conveyance Program is to develop a through-Delta conveyance alternative based on the existing configuration of the Delta with some modifications. Some construction of improvements in the south and north would occur within the first stage to improve conditions for ecosystem and water management reliability. Other parts of the first stage consist of studies and evaluations of major conveyance features to allow for these conveyance projects to be ready for permitting and construction in later stages should the projects be necessary to meet Program objectives.

The Conveyance Program is intended to provide changes to Delta channels and project operations which will improve the movement of water through the Delta and to the Central Valley Project and State Water Project export facilities. A through-Delta conveyance alternative based on existing Delta configuration with some modifications would be developed and its effectiveness evaluated. Then additional conveyance improvements or other water management actions would be implemented, as necessary to meet CALFED goals and objectives. The Program also proposes changes involving the intertie of SWP/CVP facilities, water quality improvements to local water facilities, flood control and ecosystem improvements, continuing the temporary barriers until permanent operable barriers are constructed and operational, and resolving water quality concerns at San Luis Reservoir during low reservoir-level conditions.

The CALFED Record of Decision (ROD) identified three commitments to be met. For each ROD commitment, key objectives have been identified for the Conveyance Program:

- **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.
 - Increase water deliveries to SWP and CVP water contractors south of the Delta by increasing the maximum diversion through the existing intake gates at Clifton Court Forebay to 8500 cfs to allow greater use of SWP export capacity and install permanent operable barriers in the south Delta.
 - Increase SWP pumping to the maximum capability of 10,300 cfs.
 - Increase fish protection by improving fish screening at CVP and SWP export facilities.

- Design and construct floodway improvements on the lower San Joaquin River to provide conveyance, flood control and ecosystem benefits.
- Reduce agricultural drainage from Veale and Byron Tracts in the Delta. (The reporting on this action has been moved to the Water Quality Program, because it better fits the goals and objectives of that Program.)
- **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.
 - Evaluate and implement improved operational procedures for the Delta Cross Channel (DCC) to address fishery and water quality concerns.
 - Simultaneously evaluate a screened through-Delta facility on the Sacramento River of up to 4000 cfs.
 - Evaluate and implement a project at Franks Tract. This project was not originally planned in the CALFED ROD, but has indicated a strong potential to improve water quality and fisheries in the Delta, either as a stand-alone project or in concert with the through-Delta facility. (The reporting on this action has been moved to the Water Quality Program, because it better fits the goals and objectives of that Program.)
 - Design and construct floodway improvements in the North Delta to provide well-integrated flood control and ecosystem improvements, and improve water supply reliability, water quality, levee stability and recreation opportunities to the extent possible.
- **Delta Mendota Canal/California Aqueduct (DMC/CA) Intertie Actions** – to consider the need for two specific DMC/CA intertie projects which physically connect the SWP and CVP facilities.
 - One connection would occur between the CVP Delta Mendota Canal and SWP California Aqueduct west of the City of Tracy.
 - One connection would be an intertie between the CVP intake facility and the SWP's Clifton Court Forebay with a corresponding increase in the capacity of the Forebay's screened intake.
- **Complementary Actions** – objectives that were not analyzed in the final Programmatic EIS/EIR.
 - The Temporary Barriers Project will seasonally install up to three rock flow control structures and one rock fish control structure in south Delta channels at various times through 2007, or until permanent flow control structures are constructed under the South Delta Improvements Program (SDIP).
 - Take additional actions to protect navigation and protect local diverters in the South Delta who are not adequately protected by temporary barriers as part of the Temporary Barriers Project.
 - Evaluate a bypass to the San Felipe Unit at the San Luis Reservoir to increase the operational flexibility of storage in San Luis Reservoir and ensure a high quality, reliable water supply for San Felipe Division contractors. (The reporting on this action has been moved to the Storage Program, because it better fits the goals and objectives of that Program.)

- Facilitate water quality exchanges and similar programs to make high quality Sierra Nevada water in the eastern San Joaquin Valley available to urban Southern California interests. (The reporting on this action has been moved to the Water Quality Program, because it better fits the goals and objectives of that Program.)
- Implement a Sacramento and San Joaquin Comprehensive Study to improve the flood control efforts from the Sacramento and San Joaquin Rivers out to the San Francisco Bay.

Targets

In the Record of Decision for the CALFED Program, there are specific dates for achieving various milestones for most of the Conveyance project actions. The following table shows the ROD dates and the dates that these milestones are currently expected to be met. Additional important target dates of significance are also shown.

Several of the Conveyance actions are part of the Delta Improvements Package (DIP) Action Plan which reflects a balance of several program elements currently being developed by CBDA. Since the Delta Improvements Package Action Plan is still under development, the dates shown below may change.

Conveyance Action	ROD Target Date	Expected Date	Comments
8500 cfs / Permanent Operable Barriers (DIP) ➤ Complete EIR/EIS ➤ Secure permits ➤ Obtain funding and authority for Head of Old River Barrier ➤ Obtain funding and authority for Middle River, Old River and Grantline Canal Barriers ➤ Transition implementation of 8500 cfs, complete dredging/diversion improvements ➤ Complete barrier construction ➤ Fully operate under 8500 cfs	12/02 7/03 12/06 12/07	12/05 2/06 2/06 2/06 2006-2007 4/08 6/08	Delays due to the complexity of the project and incorporation of elements contained in the OCAP Biological Opinion.
Clifton Court Fish Screens/10,300 cfs > Obtain funding , authority and begin operation of initial fish screens	7/06	on-hold	CBDA is reevaluating this project and the Tracy fish Test Facility.
Tracy Fish Test Facility > Obtain funding , authority and begin operation of initial fish screens	7/06	on-hold	CBDA is reevaluating this project.
Lower San Joaquin River Flood Improvements ➤ Complete envir. studies ➤ Begin construction	Early 03 7/06	Uncertain Uncertain	Delays due to insufficient funding and staffing support and delay in the Comprehensive Study report. Local coordination of this project has been difficult. The

<p>Delta Cross Channel Reoperation (DIP)</p> <ul style="list-style-type: none"> ➤ Complete studies; make recommendations ➤ Implement reoperation recommendations 	12/03	11/05, under reevaluation 1/06, under reevaluation	Delays due to the numerous contracts needed and the contracted studies requiring more time to execute and conduct. DWR is currently re-evaluating the target dates.
<p>Through Delta Facility (DIP)</p> <ul style="list-style-type: none"> ➤ Complete water quality & fish studies, and prefeasibility study; make recommendations ➤ If supported, seek funding and initiate EIR/EIS ➤ Obtain funding and authority to construct 	12/03 12/07	11/05, under reevaluation 1/06, under reevaluation 12/07, under reevaluation	Delays due to the numerous contracts needed and the contracted studies requiring more time to execute and conduct. DWR is currently re-evaluating the target dates.
<p>North Delta Flood Control & Ecosystem Restoration Improvement Program</p> <ul style="list-style-type: none"> ➤ Complete envir. studies ➤ Obtain funding and authority to construct 	Early 03 7/05	Fall 05 9/06	Delay due to the delays in executing contracts, budget cuts, difficulties in obtaining a Federal lead agency, and obtaining consensus on ecosystem alternatives.
<p>Delta Mendota Canal/California Aqueduct Intertie (DIP)</p> <ul style="list-style-type: none"> ➤ Complete envir. studies ➤ Obtain construction funding, initiate construction ➤ Complete construction, begin operations ➤ Obtain Federal study authorization for 900 cfs interite capacity 	7/04 12/04	4/ 05 10/ 05 06 10/ 06	Delay due to the delays in obtaining study funding.
<p>Clifton Court Forebay/Tracy Pumping Plant Intertie</p>	None	None	
<p>Temporary Barriers</p> <ul style="list-style-type: none"> ➤ Construct and operate 	Annually until Perm. Barriers	Annually	
<p>Additional actions under the Delta Improvements Package</p> <ul style="list-style-type: none"> ➤ Study on South Delta Hydrodynamics, Water Quality and Fish <ul style="list-style-type: none"> • Conduct pilot investigations • Conduct scientific study • Complete report 		12/05 1/06 – 12/07 No later than 08	This study is being managed by DWR under the Clifton Court Fish Screens/10,300 cfs project.

<ul style="list-style-type: none"> ➤ Study on Delta Smelt and Fish Facilities <ul style="list-style-type: none"> • Evaluate existing CHTR process • Make recommendations ➤ South Delta Fish Facility Improvements <ul style="list-style-type: none"> • Maintain and improve existing fish facilities • Conduct alternative facilities configurations and op studies • Make recommendations on new fish facility alternatives 		<p style="text-align: center;">4/04 - 6/07</p> <p style="text-align: center;">7/08</p> <p style="text-align: center;">Ongoing</p> <p style="text-align: center;">7/05 – 6/06</p> <p style="text-align: center;">7/06</p>	<p>This study is being managed by DFG and DWR under the Tracy Fish Test Facility Project. CHTR refers to the collection, handling, transportation and release of fish which occurs at the SWP and CVP fish salvaging process in the south Delta.</p> <p>This study is being managed by DWR under the Clifton Court Fish Screens/10,300 cfs project.</p>
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Any significant changes in the Conveyance Program schedules will be discussed with the managers of other potentially affected CALFED program elements, Agency Coordination Team, Water Supply Subcommittee and the California Bay-Delta Authority as soon as reasonably possible. Any concerns and/or issues that arise as a result of these changes which cannot be resolved will be brought before higher levels of authority for guidance and resolution.

Performance Measures

Performance measures translate program goals and objectives into measurable benchmarks of success. Performance measures range from relatively simple metrics to complex cross program assessments. As such, current work on Performance Measures includes counting the simple metrics and laying the technical and scientific groundwork that will allow us to perform more complex assessments later.

The Science Program and the Conveyance Program have been continuously working to design performance measures for the program. The Science Program has articulated the following three levels of Performance Measures. These will be refined as they are tailored for the unique needs of each program. For Conveyance, examples of performance measures include:

- **Level 1: Simple administrative measures.** Site-specific indicators that track direct responses of specific projects or groups of projects (such as number of dollars spent and the number of projects funded).
- **Level 2: Quantifiable accomplishments directly related to program actions.** Indicators that track the responses of groups of projects on a local or regional level (such as acre feet of conserved or storage water, miles improved levees, changes in water quality conditions, or fish counts).
- **Level 3: System-wide indicators.** Indicators that track broad, often complex, responses of groups of projects (such as water supply reliability or ecosystem health).

Because Level 3 measures gauge the combined effects of several Program Elements, the Conveyance Program will contribute to the Science Program's ongoing work in this area. The Conveyance Program is making progress on Level 1 and 2 measures. Potential performance measures are discussed or listed in the following text.

- **Potential Administrative Performance Measures (Level 1)**
 - Monitor project funding and progress (percent expenditures, percent complete)
 - Cost-sharing of project costs (percent cost-sharing met)
- **Potential Planning Performance Measures (Level 2)**
 - Acre-feet per year and cost per acre-foot (water supply projects)

Several of the Conveyance actions are expected to increase water supply reliability of Federal, State and/or local water entities. Computer modeling studies are generally performed to evaluate the incremental water supply improvements of various project alternatives over the potential life of the project. The water supply improvement of the project is measured in acre-feet and the cost of the project is measured in dollars per acre-foot.

Water supply studies have been conducted on the South Delta Improvement Program (8500 cfs – Permanent Operable Barriers), Old River and Rock Slough Water Quality Improvement Projects, Delta Mendota Canal/ California Aqueduct Intertie and San Luis Low Point Projects. The estimated water supply improvements of these studies are shown in a figure at the end of the section. These results are preliminary and may be subject to change. It should be noted that the modeling results

of each project may not be cumulative and additional studies will need to be performed to determine whether these water supply improvements are additive. The figure also shows tentative dates when the water supply improvements would be realized, however, these dates may change due to Delta Improvement Package Action Plan discussions on the scheduling of some of these projects and their progress throughout the planning and implementation phases. In general, these water supply studies compared the water supply improvements over an existing base case and set common operating criteria for all project alternatives to meet. These results will be subject to future peer review.

- Salinity, organic carbon, chloride, and bromide levels (water quality projects)

Projects such as the Delta Cross Channel Reoperation, Through Delta Facility, Franks Tract, and Old River and Rock Slough Water Quality Improvement Projects are being developed to improve water quality for in-Delta and export operations. The San Luis Reservoir Low Point Improvement Project is intended to improve water quality for local use. Salinity, organic carbon, chlorides, and bromides are good indicators of the quality of Delta water, especially as a source of drinking water. Data is being collected and computer modeling studies are being conducted to evaluate various project alternatives. If these projects are implemented, a post-project monitoring evaluation and the modeling assessments will be developed and conducted.

Preliminary studies for Franks Tract indicate the potential for salinity reductions of 10-35 % in the central Delta and 15-30% near Clifton Court Forebay. Studies have been done with similar results for bromides.

The Rock Slough Water Quality Improvement project is expecting to reduce average chloride concentrations at Contra Costa Pumping Plant No. 1 by about 5 to 10 mg/L

- Cost per fish saved (fish facility projects)
- Cost per acre of habitat restored or developed
- **Potential Operational Performance Measures (Level 2)**
 - Fish take at SWP and CVP fish salvaging facility (i.e. fish counts)
 - Fish population estimates (counts and trends of fish populations)
 - Average export pumping level (cfs/time period)
 - Water quality levels (same as above)
- **Potential Program Goal-Oriented Performance Measures (Level 3)**
 - Improve water supply reliability (i.e. long -term water deliveries)
 - Improve water quality (i.e. salinity, bromide, TOC, etc.)
 - Improve flood protection (i.e. reduction in flood repairs)

The following is a description of the performance measure activities associated with each of the Conveyance Program key objectives.

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.

8,500 cfs and Permanent Operable Barriers (South Delta Improvements Program, Delta Improvements Package) –

An Administrative Draft ASIP was completed in June 2004. Interagency meetings to review, discuss, and revise the content are ongoing. Specific performance measures are being developed by the interagency group for incorporation into the SDIP ASIP.

Clifton Court Fish Screens and 10,300 cfs – This project is being reevaluated and is currently on-hold.

Tracy Fish Test Facility – This project is being reevaluated and is currently on-hold.

Lower San Joaquin Flood Improvements – The scope of this project has yet to be defined and has been delayed due to insufficient funds.

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 (Delta Improvements Package) – This project is still in the early planning stage.

Through-Delta Facility (Delta Improvements Package) – This project is still in early planning stage.

North Delta Flood Control and Ecosystem Restoration Improvements Program – Staff has acknowledged the need for performance measures with stakeholder groups; however, lack of staff and budget resources has hampered significant progress on developing performance measures. Staff is seeking help from the Ecological Coordination Team, Agency representatives who partner to guide restoration project planning, and CBDA ERP staff in early 2005.

SWP/CVP 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) –

Clifton Court Forebay / Tracy Pumping Plant Intertie – Work on this project has not yet commenced.

Complementary Actions – objectives that were not analyzed in the final Programmatic EIS/EIR.

Temporary Barriers Project – Under the terms of the existing permits for this project, a monitoring program was developed and is implemented each year. A report is written and submitted to the regulatory agencies early the following year. Included in the monitoring is fishery studies, water quality monitoring, hydrodynamics, sensitive birds and reptile monitoring, and water level data. Refinements to improve the monitoring plan is considered in discussions with the fish and wildlife agencies to implement in the next year's program. The monitoring program is designed to collect the impacts of the temporary barriers to analyze and use for the development and design of the permanent barriers proposed under the South Delta Improvement Plan.

Oversight, Coordination, and Science –

Accomplishments

Many of the proposed Conveyance actions are continuing their planning phase of their development. The 8500 cfs operations, permanent operable barriers and the Delta Mendota Canal/ California Aqueduct Intertie project have or are in the process of completing activities on their environmental documents to construct and/or implement these projects. The Delta Cross Channel Reoperation and Through-Delta Facility are two projects which are continuing their studies to determine their consideration for development. The Temporary Barriers Project continues to be installed in the south Delta on an annual basis until the Permanent Operable Barriers are installed and operational.

Several of the Conveyance actions are components of the Delta Improvements Package (DIP) Action Plan which reflects a balance of several program elements currently being developed by CBDA. These projects currently include 8500 cfs Operations, Permanent Operable Barriers, Delta Mendota Canal/California Aqueduct Intertie, Delta Cross Channel Reoperation, and Through-Delta Facility projects.

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.

8,500 cfs and Permanent Operable Barriers (South Delta Improvements Program, Delta Improvements Package):

In the past year, a preferred alternative was selected in October and a second administrative draft of the environmental documents was issued in December 2004. The final impact evaluations are being completed.

Clifton Court Fish Screens and 10,300 cfs:

All planning activities except for a debris and hydrodynamic study were placed on-hold pending the recommendations by the South Delta Fish Facilities Forum Group. This Group is reviewing pertinent fish facility information with the intent of providing guidance and developing priorities in the development of the Clifton Court Forebay and Tracy Fish Test Facility projects. An evaluation report on the debris studies is being completed. A multi-year hydrodynamic study to better understand the movement of water, fish and water quality in the south Delta was initiated at the end of the year. The first year is a pilot study by DWR, USBR, and USGS.

Tracy Fish Test Facility:

Activities continue at the existing Tracy Fish Collection Facility with the focus towards onsite and laboratory research to improve operations of the facility. In an effort to better understand the affect of Delta smelt in SWP and CVP fish salvaging facilities and evaluate potential improvements in salvaging techniques, study proposals for the evaluation of fish collection, handling, transportation and release (CHTR) are under various stages of implementation. Laboratory evaluations have been conducted of a TFTF fish sorting and holding tank physical model, whole facility evaluation, predator tracking, recessed holding tank stress tests, improved debris management, and fish movement using sonar. A new building and expansion of UCD's aquaculture facility at the SWP's Skinner Fish Collection Facility was completed to conduct fish collection, handling, transportation and release studies using Delta smelt.

Lower San Joaquin Flood Improvements:

Opportunities for the development of conceptual flood improvements as identified in the internal draft Comprehensive Study Lower San Joaquin River Assessment Information Report (October 2001) were discussed with various organizations in the project area including the San Joaquin River Task Force. Local flood control agencies have proposed a flood control improvement project for consideration.

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 (Delta Improvements Package):

In the past year, a Delta Cross Channel Pilot Study was conducted to test new technologies for measuring river velocity structures and the movement of juvenile salmon. Analysis and documentation of past studies (2000-2003) is being conducted. Preparation for a full-scale integrated fisheries and water quality study will commence after completion of the reports on past studies.

Through-Delta Facility (Delta Improvements Package):

Studies were initiated on the swimming and passage performance of adult sturgeon at U. C. Davis and fish passage at the Sacramento Deep Water Ship Channel. These studies are continuing and is expected to be completed in June 2005.

A board weir structure was constructed in the Yolo Bypass toe drain to evaluate fish passage alternatives, however, this study is being discontinued for lack of potential value in the designing a TDF fish passage.

A prefeasibility study on the technical viability of alternatives for a TDF was initiated. Progress on this study has been slow due to a lack of staff and contracting problems.

North Delta Flood Control and Ecosystem Restoration Improvements Program:

Progressed significantly in preparing environmental document including alternatives refinement, conceptual design preparation, and impact analysis. Continued work with Agency staff and academic science panel to provide science advisement for alternatives development and project planning. Progressed in area sediment dynamics studies including sampling and draft report. The North Delta Agency Team continues ASIP preparation and is addressing other project permit requirements.

SWP/CVP 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):

Completed CALSIM II and DSM modeling studies. Initiated final design of a 450/900 cfs alternative and supporting environmental documentation. DWR also provided conceptual and preliminary design support, including land management and right of way, intertie configuration preferences and operation integration. Public review of the draft EA/IS was completed in December 2004.

Clifton Court Forebay/Tracy Pumping Plant Intertie:

Work on this project is not expected to begin until year 6.

Complementary Actions – objectives that were not analyzed in the final Programmatic EIS/EIR.

Temporary Barriers Project:

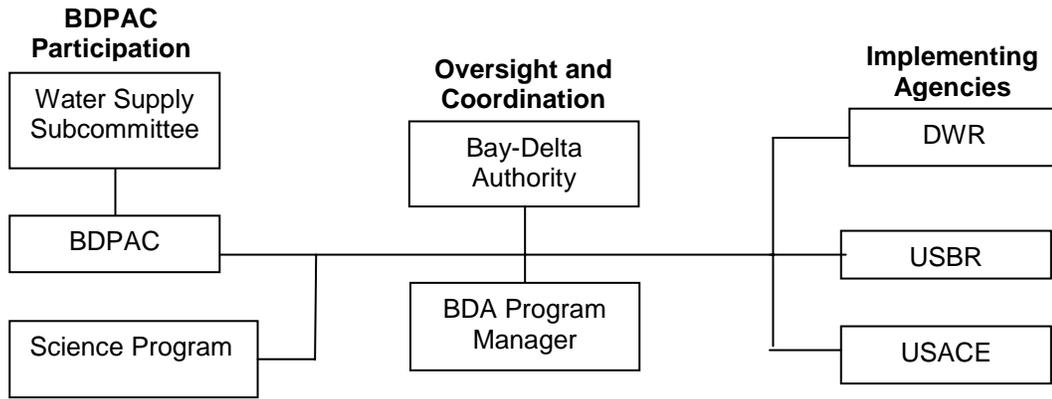
This past year three portable pumps were installed on Union Island to mitigate the effects of the barriers upstream of these diversions. Portable pumps were also installed to assist agricultural diversions into Tom Paine Slough. Obtained USACE permit to conduct limited dredging and modify agricultural diversion on Union Island along Old River. Nine diversions were included in the project that began in August 2004 and was completed in October 2004. A hyacinth removal project began in Tom Paine Slough in early December 2004 and completed January 2005. Removal of the aquatic plants that have infested the slough should help improve irrigation water conveyance and reduce reliance on portable pumps in 2005 and beyond.

Oversight, Coordination, and Science:

The California Bay-Delta Program provided general oversight to assist in meeting the goals and objectives of the Conveyance Program, ensure integration with other programs, and provide Science support, where necessary. DWR managed the overall Conveyance Program.

Program Structure

A conceptual organizational chart of how the Conveyance Program is managed is provided below.



Agency	Roles and Responsibilities
California Bay-Delta Authority	<ul style="list-style-type: none"> • Oversight and coordination
Department of Water Resources	<ul style="list-style-type: none"> • State lead agency • Manages 8500 cfs/Permanent Operable Barriers, Clifton Court Fish Screens/10,300 cfs, North Delta Flood Control and Ecosystem Restoration Improvements Program, Through-Delta Facility, Franks Tract, Lower San Joaquin River Flood Control Improvements(co-lead), Clifton Court Forebay/Tracy Pumping Plant Intertie and Temporary Barriers Projects • Oversees the Old River and Rock Slough Water Quality Projects under the Contra Costa Water District • Coordinate activities with USBR • Provides Conveyance Program oversight • Participate in meetings/hearings
U.S. Bureau of Reclamation	<ul style="list-style-type: none"> • Federal lead agency • Manages the Delta Cross Channel Reoperation, Tracy Fish Test Facility, and Delta Mendota Canal/California Aqueduct Intertie Projects • Coordinate activities with DWR • Participate in meetings/hearings
U.S. Army Corps of Engineers	<ul style="list-style-type: none"> • Federal lead agency and permitting agency • Co-Manages Lower San Joaquin River Flood Control Improvement and potentially North Delta Flood Control and Ecosystem Restoration Project with DWR • Conduct field studies • Review/comment on work products • Participate in meetings/hearings

Agency	Roles and Responsibilities
Department of Fish and Game	<ul style="list-style-type: none"> ● Fisheries ● Permitting agency ● Review/comment on work products ● Conduct field studies ● Participate in meetings/hearings
U.S. EPA	<ul style="list-style-type: none"> ● Water quality ● Review/comment on work products ● Participate in meetings/hearings
U.S. Fish and Wildlife Service	<ul style="list-style-type: none"> ● Fisheries ● Permitting agency ● Conduct field studies ● Review/comment on work products ● Participate in meetings/hearings
National Oceanic and Atmospheric Administration	<ul style="list-style-type: none"> ● Fisheries ● Permitting agency ● Review/comment on work products ● Participate in meetings/hearings
U.S. Geological Survey	<ul style="list-style-type: none"> ● Hydrodynamics and Modeling ● Conduct field studies ● Review/comment on work products ● Participate in meetings/hearings

Major Activities

Several major Conveyance actions are expected to complete their planning phase and begin their construction and/or operational phase in the next four years. Several other Conveyance actions are still being evaluated to determine their feasibility. The progress of some Conveyance actions have been affected by funding issues. Due to the high cost estimates for the Tracy Fish Test Facility and the Clifton Court Fish Screen projects, these projects are being reevaluated to determine if there are more cost-effective alternatives to achieving similar benefits. The State General Fund reductions which have been experience during the past two years are currently expected to continue into Year 6. These fund reductions will affect the activities of the Lower San Joaquin Flood Improvement Project and North Delta Flood Control and Ecosystem Restoration Improvement Program. Several Conveyance actions have also been expecting Federal cost-sharing funds, however, those funds have not yet been secured.

Delta Improvements Package Action Plan. The Delta Improvement Package Action Plan represents a balanced approach to achieving key goals of water supply reliability, ecosystem restoration, water quality improvement, and levee system integrity in accordance with the CALFED Record of Decision. The Plan proposes to take a series of actions over the next few years which carry out or are closely related to key ROD commitments. Several Conveyance Program actions such as the South Delta Improvements Program (SDIP), and Delta Mendota Canal / California Aqueduct are components of that proposal which expect to be implemented. The Plan also includes the evaluation of several other Conveyance Program actions such as Delta Cross Channel Reoperation and Through-Delta Facility, as well as several south Delta studies. The Conveyance Multi-Year Program Plan is intended to be consistent with the Delta Improvement Package Action Plan.

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.

8,500 cfs and Permanent Operable Barriers (South Delta Improvements Program, Delta Improvements Package) – DWR is the lead agency for this project. DWR and the USBR are proposing to increase the SWP diversion at Clifton Court Forebay to 8500 cfs, as described in the South Delta Water Improvements Program (SDIP) and Delta Improvements Package (DIP). SDIP also includes conveying 100,000 acre-feet of Level 2 refuge water for the CVP, using up to 75,000 acre-feet of releases from Shasta Reservoir for SWP Delta water quality requirements, installing permanent operable barriers for water level protection in the South Delta, installing a permanent operable fish control barrier at the Head of Old River; dredging channels for increased conveyance capacity, and improving specific local diversions in the south Delta. South Delta water quality protection agreements will be integral to the increased pumping.

Funding: State Water Project funds supported the planning work and Proposition 13 and 50 are expected to fund the barrier construction.

Schedule: Complete Final SDIP EIS/EIR by the end of 2005; transitional implementation of 8500 cfs, dredging/diversion improvements during 2006-2008; construct permanent operable barriers by April 2008; and fully operate under 8,500 cfs by June 2008.

Clifton Court Fish Screens and 10,300 cfs – DWR is the lead agency for this project. All major project activities in the development of new fish screening at the State Water Project's water intake facilities at Clifton Court Forebay are on hold pending recommendations of the South Delta Fish Facilities Forum. One of the proposed recommendations of the Forum is to conduct a more thorough analysis and evaluation of cost-effective alternatives such as a Clifton Court Forebay "short-circuit" intake. DWR will conduct this analysis once a decision is made to move ahead with this recommendation and the resources are available to perform the work.

Under this project, DWR is supporting the efforts of a hydrodynamics study in the south Delta. DWR, USBR, USGS, DFG, NOAA and USFWS are investigating critical gaps in the understanding of fish movements, distribution, and entrainment in the south Delta due to various CVP and SWP operational regimes. These studies will help evaluate the near and far-field effects of south Delta exports and

barrier operations on fish so that potential benefits of the EWA, VAMP, or SDIP operational options can be maximized. In addition, this effort will be used to support future planning activities. Pilot investigations began in May 2004 and subsequent investigations are expected to continue through 2007. Study results and recommendations are expected to be available by 2008.

DWR will complete a report which evaluates alternative trash rack designs to improve debris collection in SWP and CVP fish salvaging operations in 2005.

Funding: Proposition 13 funds are being used to support those efforts to develop new or improve existing fish facilities to better protect fish in the Delta and State Water Project funds are being used to support all other work efforts under this project.

Schedule: The Clifton Court Fish Screen project is temporarily on-hold pending decisions of the South Delta Fish Facility Forum and, subsequently the CBDA. However, the hydrodynamic study of the south Delta is expected to continue.

Tracy Fish Test Facility – USBR is the lead agency for this project. All major project activities on the development of the Tracy Fish Test Facility are on hold pending the recommendations of the South Delta Fish Facilities Forum, however, research activities are still occurring in USBR's hydraulics lab in Denver and onsite at the Tracy Fish Collection Facility to improve screening/salvage of fish at the TFCF in the south Delta.

Under this project, DWR is continuing support of a fish Collection, Handling, Transportation and Release Study being conducted by the Department of Fish and Game with the assistance of DWR and USBR. This study will evaluate the survival of fish through the fish salvaging process and determine methods to improve existing fish salvaging facilities at the SWP and CVP export facilities. The fish Collection, Handling, Transportation and Release study proposals are expected to get underway in Year 5 and be completed in Year 8.

Funding: Federal funds has supported the Tracy Fish Facility Improvement Program research efforts, however, funding for the construction of fish facility improvements has yet to be determined.

Schedule: On-hold; schedule of the Tracy Fish Test Facility yet to be determined

Lower San Joaquin Flood Improvements – The US Army Corps of Engineers and DWR are co-lead agencies for this project. As a result of the complexities involved in implementation of this project, project priorities and objectives continue to be reevaluated with the USACE in coordination with local flood control interests. It is expected that the development of this project will occur in parts or phases. DWR has not been appropriated any funds for Year 5 and will continue to pursue financial support for this project. The Corps of Engineers, with limited funding, will evaluate a proposal by local interests to develop a flood control project.

Funding: Funding source yet to be determined.

Schedule: Uncertain since there is no State funding and limited Federal funding.

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 (Delta Improvements Package) – USBR is the lead agency for this project. The DCCTDF Team will evaluate the results of three years of studies and will initiate a full-scale integrated fisheries and water quality study in Fall 2006. Recommendations for DCC re-operation strategy are not expected until November 2008. The DCC re-operation will be evaluated on hydrodynamics, water quality, juvenile releases in the vicinity of the DCC and TDF, and adult striped bass and sturgeon.

Funding: State Water Project funds and Proposition 13 (Conveyance, Fish Facilities) funds

Schedule: Complete technical analysis and make recommendations November 2005; implement reoperation recommendations by January 2006.

Through-Delta Facility (Delta Improvements Package) – DWR is the lead agency for this project. The DCCTDF Team will refine concepts and feasibility of TDF options, determine TDF benefits and impacts on water quality and fisheries, and determine the effects of TDF on other California Bay-Delta Program actions. An independent science panel will review all of the technical information of the three years of field and research studies developed for the project and provide its advice and recommendations on the technical viability and water quality and fishery benefits and impacts of a TDF. The DCCTDF will integrate and analyze the information and provide its recommendations to the California Bay-Delta Authority (CBDA). If CBDA determines that the TDF is needed, environmental documentation would be prepared, and preliminary design and environmental permitting for a proposed project would occur.

Funding: State Water Project Funds and Proposition 13 (Conveyance, Fish Facilities) Funds

Schedule: Complete technical analysis and make recommendations November 2005; if supported, seek funding and initiate EIR/EIS by January 2006.

North Delta Flood Control and Ecosystem Restoration Improvements Program – DWR is the state lead agency for this project. A final science panel meeting will be convened in early 2005. Sediment dynamics modeling and related studies will be completed in spring 2005. At the reduced State funding level, it is estimated that only completion of the environmental documents and some preliminary design work will be completed. Project environmental documentation is expected to be completed by fall 2005. DWR has been asked to expand the scope of the environmental documents to include additional flood control options advocated by Sacramento County for the

Beach Stone Lakes and Franklin Pond areas. This action would cause a delay in completing environmental studies of at least 6-8 months. Funding for design and construction has not yet been identified, but will be pursued during 2004-2005 through the CBDA solicitation process. North Delta Flood Control and Ecosystem Restoration Improvements will continue careful coordination with DCC and TDF actions, Levee Program actions, and CALFED ERP and Science Program actions. The participation of the U.S. Army Corps of Engineers in this being evaluated.

Funding: State General Funds has been the primary source of funding, however, funds have been limited.

Schedule: Complete early 2008.

SWP/CVP 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) – USBR is lead agency for this project. USBR will complete final design of the proposed action in June 2005. Public review of the draft EA/IS was completed in December 2004. The San Luis and Delta-Mendota Water Authority is the CEQA lead. The FONSI/NEG DEC is expected to be signed in March 2005. Final design is expected to be completed in June 2005 and construction initiated in September 2005.

Funding: \$28.3 million from local water users

Schedule: Complete construction and begin operation by late 2006.

Clifton Court Forebay / Tracy Pumping Plant Intertie – DWR is lead agency for this project. Work activities in support of providing increased operational flexibility to improve water quality, water supply reliability, and minimizing impacts on fish are expected to start in year 6.

Funding: Funding source yet to be determined

Schedule: Completion yet to be determined.

Complementary Actions – objectives that were not analyzed in the final Programmatic EIS/EIR.

Temporary Barriers Project – DWR is lead agency for this project. The temporary barriers will continue to be installed seasonally to improve water levels and circulation in the south Delta. Agency, stakeholder, and local communication will occur regarding barrier status and operation through weekly reports via email. Permits obtained early in Year 5 have allowed implementation of the dredging/agricultural diversions modification program that began later that year. Dredging and/or diversion modifications will be coordinated closely with local beneficiaries to perform work and to update State and Federal agencies.

Funding: State Water Project funds \$6.6 - 7.1 M annually

Schedule: Complete annually until permanent operable barriers are installed (2008)

Oversight, Coordination, and Science – CBDA will provide general oversight to assist in meeting the goals and objectives of the Conveyance Program, ensure integration with other programs, and provide Science support, where necessary. DWR will manage the overall Conveyance Program

Funding: State Water Project Funds

Schedule: Completion Ongoing.

Public Involvement and Outreach

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.

8,500 cfs and Permanent Operable Barriers (South Delta Improvements Program, Delta Improvements Package) – DWR held a public information meeting in December 2004.

Clifton Court Fish Screens and 10,300 cfs – The South Delta Fish Facility Forum has been conducting meetings over the past year to discuss pertinent fishery issues and develop recommendations concerning the alternatives to constructing new fish screens at the intake to Clifton Court Forebay and the Tracy Facility. These meetings have been opened to all who are interested. It is expected that the Forum will be proposing recommendations which will be considered by the California Bay-Delta Authority for action.

Tracy Fish Test Facility – See discussion under Clifton Court Fish Screens and 10,300 cfs.

Lower San Joaquin Flood Improvements – Scope of the project has yet to be defined.

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 (Delta Improvements Package) – Public involvement has not yet been initiated since the project is still in the early planning stage.

Through-Delta Facility (Delta Improvements Package) – Public involvement has not yet been initiated since the project is still in the early planning stage.

North Delta Flood Control and Ecosystem Restoration Improvements Program – 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 NOAA Fisheries.

SWP/CVP 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) – Briefing to the Water Supply Subcommittee in November 2004. Public review and comment of the draft EA/IS in December 2004.

Clifton Court Forebay/Tracy Pumping Plant Intertie – Project has not yet begun.

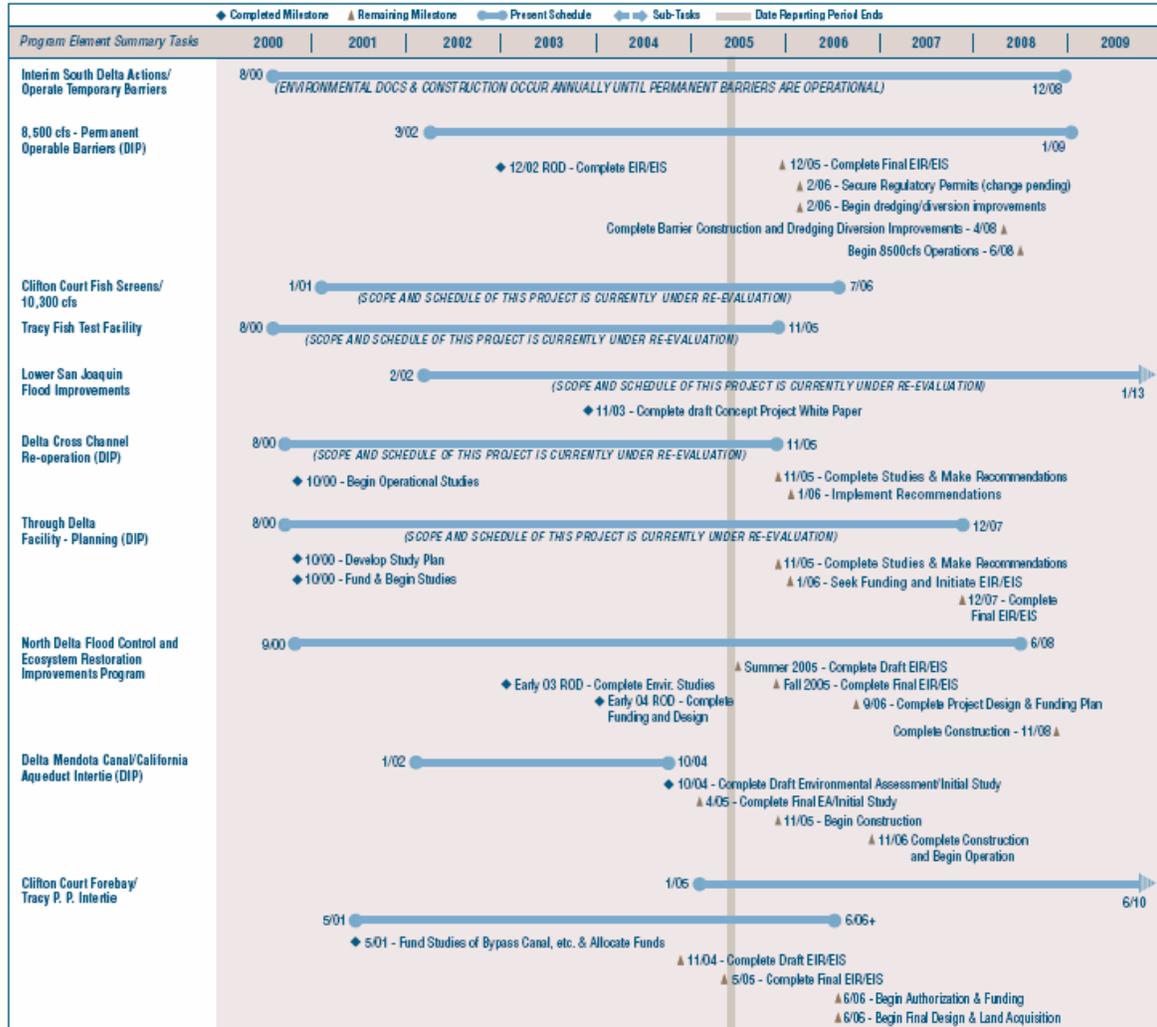
Complementary Actions – objectives that were not analyzed in the final Programmatic EIS/EIR.

Temporary Barriers Project – The Temporary Barriers Project is an ongoing project operating under existing regulatory permits and private Temporary Entry Permits (needed for site access). Formal coordination is accomplished in accordance with the various permits. Informal agency, stakeholder, and local communication occur regarding barrier status and operation through weekly reports via email.

Oversight, Coordination, and Science –

Schedule

CONVEYANCE



Integrating Science, Environmental Justice and Tribal Relations

The planning and development of the actions under the Conveyance Program will involve a coordinated effort with Science, Environmental Justice and Tribal Relations. This coordinated effort will occur at the working level as well as the management and oversight levels and is expected to vary for each of the Conveyance projects. Project teams and/or work groups will be utilized and briefings will be made to respective Bay-Delta Public Advisory Committee subcommittees to ensure the needed project coordination and implementation in accordance with the CALFED Record of Decision.

Science

The Conveyance Program will work closely with the Science Program to identify key knowledge gaps relative to improvement of water supply reliability and water quality and concurrent improvement and minimization of impacts on Delta fisheries. Conveyance will continue to implement and refine existing scientific practices, such as independent peer review, collaborate with the Science Program to design and conduct programmatic reviews, and continue to fund scientific studies pertinent to knowledge needed by the program. Science reviews have been used for delta smelt salvage and multidisciplinary field studies at the Delta Cross Channel and south Delta channels, and will continue to be used for all technical projects. The need for and support of external scientific reviews is expected to increase in the coming years

In addition, the Conveyance Program is also developing performance measures to assess progress toward improving water supply reliability and quality projected for, and resulting from installation and operation of conveyance projects. Performance measures translate program goals and objectives into measurable benchmarks of success. Conveyance is currently using simple administrative metrics (such as project expenditures and percent completion) to track performance. The program is also undertaking a number of scientific studies to develop a more robust scientific basis for developing and evaluating viable project alternatives, which in turn, will support more complex performance metrics such as quantifiable changes in water quality parameters changes directly related to the operation of one or more Conveyance projects. Future investments in performance measurement will support more complex cross-program assessments such as determining the effect of conveyance projects on overall improvements in water supply reliability. .

The following is a description of the Science activities associated with each of the Conveyance Program key objectives.

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.

8,500 cfs and Permanent Operable Barriers (South Delta Improvements Program):

The Science Program will be holding a science symposium on the findings of the SDIP Action Specific Implementation Plan (ASIP) after the draft ASIP is issued. The Multi-Species Conservation Strategy (MSCS) created a two-tiered approach to ESA and NCCPA compliance that corresponds to CALFED Program's two-tiered approach to compliance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The first tier of compliance is embodied in the MSCS itself. For the CALFED Program project actions identified in the PEIS/EIR and ROD, an Action Specific Implementation Plan (ASIP) is developed to address the ESA, CESA, and California Natural Community Conservation Planning Act (NCCPA) consultation requirements of Federal and State agencies. As a second tier document, this ASIP focuses on issues specific to the South Delta Improvements Program proposed actions, and addresses the biological assessment requirements.

Additionally, DWR is developing a study plan to evaluate the impacts of predation on steelhead in Clifton Court Forebay in coordination with State and federal fisheries agencies. These studies will help better understand what is happening to steelhead and what we might be able to do to improve operations and/or the facilities to protect the steelhead and other similar fish species. The study plan is expected to be reviewed by the Central Valley Fish Facility Review Team, the Interagency Ecological Program and an independent Science review panel prior to implementation

Clifton Court Fish Screens and 10,300 cfs:

A South Delta Hydrodynamic Study is a multi-year study being conducted to better understand the flows and movement of water, fish and water quality in the south Delta. It is hoped that the information obtained from this study will enable the SWP and CVP to better operate its export facilities to improve water deliveries and water quality, and minimize impacts on Delta fisheries. An initial pilot study proposal has been evaluated by the Interagency Ecological Program and a Science review panel and is being implemented in FY04/05. This project may also conduct debris, water quality and fishery studies which will likely involve the need for Science reviews and oversight. The hydrodynamic study plan is expected to be reviewed by the Central Valley Fish Facility Review Team, the Interagency Ecological Program and an independent Science review panel prior to implementation.

Tracy Fish Test Facility:

Ongoing studies to further define the integrated components of TTF have been following a rigorous review process that includes peer review, interagency/stakeholder review, and publishing of volume series. In conjunction with the efforts to improve SWP and CVP fish salvaging facilities, DWR is funding a fish collection, handling, transportation and release study at existing export fish salvaging facilities. A study plan for fish collection, handling, transportation, and release at SWP and CVP fish salvaging facilities has been reviewed and approved by the Central Valley Fish Facility Review Team, the Interagency Ecological Program and an independent Science review panel. There are additional study plans being developed to evaluating potential improvements to these facilities. These studies will also involve review by science advisors if needed.

Lower San Joaquin Flood Improvements:

This project will define its science issues during the EIR/EIS phase, which has not yet been planned.

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:

In past studies conducted, an independent science panel has reviewed study proposals to address 22 unknowns outlined in the overall work plan for the DCC and TDF. The panel's comments and suggestions were included in the final work study plans. In subsequent studies, this process is expected to change. A regional hydrodynamic study of the north and central Delta is being prepared and is expected to be reviewed by the Central Valley Fish Facility Review Team, the Interagency Ecological Program and an independent Science review panel prior to implementation. A draft study proposal is expected to be available by 2006.

Through-Delta Facility:

In past studies conducted, an independent science panel has reviewed study proposals to address 22 unknowns outlined in the overall work plan for the DCC and TDF. The panel's comments and suggestions were included in the final work study plans. In subsequent studies, this process is expected to change. Studies are currently being conducted to determine if sturgeon have the ability to swim up through a bypass flume system. A regional hydrodynamic study of the north and central Delta is being prepared and is expected to be reviewed by the Central Valley Fish Facility Review Team, the Interagency Ecological Program and an independent Science review panel prior to implementation. A draft study proposal is expected to be available by 2006.

North Delta Flood Control and Ecosystem Restoration Improvements Program:

Numerous science issues of concern for North Delta Flood Control and Ecosystem Restoration Improvements Program include sedimentation processes, dendritic channel creation and function, exotics, mercury methylation, salinity/WQ effects (organic carbon, THM), subsidence reversal, mosquitoes, and hydrodynamics. DWR North Delta staff has engaged an academic peer review panel to address the above issues of concern. One very successful panel meeting was held in fall 2004 that built on the work of the two previous panel meetings. A final panel meeting is planned for 2005. Sediment studies have progressed and will be completed in spring 2005. There is currently no funding available for additional science studies.

SWP/CVP 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:

Performance measures and/or adaptive management will be incorporated into the project in coordination with the Science program.

Clifton Court Forebay / Tracy Pumping Plant Intertie:

Work activities regarding this project are not expected to commence until year 6.

Complementary Actions – objectives that were not analyzed in the final Programmatic EIS/EIR.

Temporary Barriers Project:

Monitoring data and general performance of past operations of these barriers will guide the design of the permanent operable barriers.

Science Process

Some Conveyance projects have utilized Science review panel and/or workshops to incorporate input from the Science community. It is expected that each project will evaluate its Science needs separately, however, in most cases, it is expected that the use of with Science advisors or Science review panels will be utilized to guide and support the development of the various Conveyance projects. An additional process will be developed to evaluate the overall Conveyance Program and the interaction among the various individual Conveyance projects as well the interaction with other CALFED Program Elements.

Application of science in major Conveyance Program activities

Major program activities, Years 6-9	Studies and research	Analysis of existing data	Communication	Monitoring	Peer review	Use of Science Boards and technical experts	Cross-program coordination (note which program)	Estimated funding for science portion of this activity
8,500 cfs and Permanent Operable Barriers (South Delta Improvements Program)	X	X	X	X	X	X	ERP	\$2M
Clifton Court Fish Screens and 10,300 cfs	X	X	X	X	X	X	ERP DWQ	\$5M
Tracy Fish Test Facility	X	X	X	X	X	X	ERP	\$2M
Lower San Joaquin Flood Improvements								
Delta Cross Channel Re-Operation	X	X	X	X	X	X	ERP DWQ	\$3-4M
Through-Delta Facility	X	X	X	X	X	X	ERP DWQ	\$4-6M
North Delta Flood Control and Ecosystem Restoration Improvements Program	X	X	X	X	X	X	ERP Levees	
Delta Mendota Canal/California Aqueduct Intertie								
Clifton Court Forebay / Tracy Pumping Plant Intertie								

Environmental Justice

Environmental Justice is an Implementation Principle in the Record of Decision which applies to all CALFED Program Elements. During the planning and development of the Conveyance actions, fair treatment will be sought of people of all races, cultures, and incomes, and proposed project actions shall not cause any segment of the population to bear a disproportionately high or adverse health, environmental, social, or economic impact. Particular emphasis will be placed on underserved and overburdened minority and low income communities.

Under those Conveyance actions involving environmental justice issues, the Conveyance Program will work with the Environmental Justice Coordinator and EJ Subcommittee to resolve these issues. The following is a description of the environmental justice activities associated with each of the Conveyance Program key objectives.

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.

8,500 cfs and Permanent Operable Barriers (South Delta Improvements Program):

Environmental justice issues will be addressed through the environmental documentation impact analysis process.

Clifton Court Fish Screens and 10,300 cfs:

Major activities for this project are on hold.

Tracy Fish Test Facility:

No environmental justice concerns have been identified for this project.

Lower San Joaquin Flood Improvements:

This project, in collaboration with local community interests and stakeholders will research and identify the environmental justice issues during the EIR/EIS phase, which has not yet been planned.

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:

No environmental justice concerns have been identified for this project.

Through-Delta Facility:

No environmental justice concerns have been identified for this project.

North Delta Flood Control and Ecosystem Restoration Improvements Program:

Environmental justice issues will be addressed through the environmental documentation impact analysis process.

SWP/CVP 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:

Effects on environmental justice are being analyzed using the same significance criteria applied in the CALFED Final Programmatic EIS/EIR. Preliminary analysis indicates that no environmental justice impacts would occur.

Clifton Court Forebay/Tracy Pumping Plant Intertie:

Work activities regarding this project are not expected to commence until year 6.

Complementary Actions – objectives that were not analyzed in the final Programmatic EIS/EIR.

Temporary Barriers Project:

As an ongoing project since the early 1990's, the original environmental documents upon which this project was approved were not prepared to address more recent issues such as environmental justice. The South Delta Improvements Program (SDIP), which includes permanent barriers to replace the temporary barriers, is expected to address this issue.

Tribal Relations

Tribal knowledge and involvement in the implementation and evaluation of the Conveyance Program is an Implementation Principle in the Record of Decision. During the planning and development of the Conveyance actions, a determination of the need for tribal involvement will be made for each project as early as possible. This may generally occur during the environmental documentation phase of the project.

A major effort of the Bureau of Indian Affairs and Tribes is to protect and preserve Indian Trust Assets in the areas of water rights, water quality, water supply, archeological resources protection(cultural resources), and watershed protection and improvements. Under those Conveyance actions needing tribal involvement, the Conveyance Program will work with tribal representations to resolve issues concerning these areas.

The following is a description and/or status of the tribal relations activities associated with each of the Conveyance Program key objectives.

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.

8,500 cfs and Permanent Operable Barriers (South Delta Improvements Program):

Tribal relations issues will be addressed through the environmental documentation impact analysis process.

Clifton Court Fish Screens and 10,300 cfs:

Major activities for this project are on hold.

Tracy Fish Test Facility:

No tribal concerns have been identified for this project.

Lower San Joaquin Flood Improvements:

This project will be defining the tribal relation issues during the EIR/EIS phase, which has not yet been planned.

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:

No tribal concerns have been identified for this project.

Through-Delta Facility:

No tribal concerns have been identified for this project.

North Delta Flood Control and Ecosystem Restoration Improvements Program:

Tribal relations issues will be addressed through the environmental documentation impact analysis process.

SWP/CVP 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:

Reclamation provided the draft EA/IS to all interested parties for review and comment. This distribution included interested tribes.

Clifton Court Forebay/Tracy Pumping Plant Intertie:

Work activities regarding this project are not expected to commence until year 6.

Complementary Actions – objectives that were not analyzed in the final Programmatic EIS/EIR.

Temporary Barriers Project:

The Temporary Barriers Project is an ongoing program of seasonally installed rock barriers. The sites for the barriers are highly disturbed from agricultural activities, levee construction, and maintenance. The sites have been surveyed for prehistoric or historic archeological and cultural resources during the preparation of the original environmental documents for the project. The Native American Heritage Commission was contacted as part of the survey. No such resources were found.

Cross-Program Relationships

The planning and development of the various actions under the Conveyance Program will involve a coordinated effort with other CALFED Program Elements. This coordinated effort will occur at the working level as well as the management and oversight levels and may vary from project to project. Project teams, work groups and/or committees will be utilized and briefings will be made to respective Bay-Delta Public Advisory Committee subcommittees to ensure the needed project coordination across all CALFED Program Elements.

Storage – The development of 8500cfs/Permanent Operable Barriers Clifton Court Fish Screens/10,300 cfs, Delta Cross Channel Reoperation, Through-Delta Facility, and Franks Tract projects will be coordinated with the various Storage projects to ensure that the operational benefits of these projects are maximized and the impacts are minimized. .

Environmental Water Account (EWA) – The development of 8500cfs/Permanent Operable Barriers and Clifton Court Fish Screens/10,300 cfs projects will involve coordination with the EWA Program to ensure the operational feasibility of the proposed actions.

Water Transfer – Similarly, the development of 8500cfs/Permanent Operable Barriers and Clifton Court Fish Screens/10,300 cfs will involve coordination with the Water Transfers Program.

Drinking Water Quality – The operations of 8500cfs/Permanent Operable Barriers, Clifton Court Fish Screens/10,300 cfs, Delta Cross Channel Re-operation, Through-Delta Facility, Franks Tract, Old River and Rock Slough Water Quality Improvement Projects are expected to have an impact on water quality in the Delta. As a result, these projects will be developed in coordination with the Water Quality Program.

Ecosystem Restoration – The development of Clifton Court Fish Screens, Lower San Joaquin Flood Improvements, Lower San Joaquin River Flood Improvements, 8500cfs/Permanent Operable Fish Control Barrier on Head of Old River, Delta Cross Channel Re-Operation, Through Delta Facility, Franks Tract, and North Delta Flood Control and Ecosystem Restoration Improvements are expected to result in ecosystem improvements in the Delta. These projects will be coordinated with the Ecosystem Program.

Conveyance projects such as the Lower San Joaquin River Flood Improvement Project, North Delta Flood Control and Ecosystem Restoration Improvement Program, Sacramento and San Joaquin Comprehensive Study and possibly others will have direct and indirect land-use implications for rural communities and agricultural landowners in the Delta. These projects will coordinate their planning and development efforts with the Bay-Delta Public Advisory Committee's Working Landscape Subcommittee to integrate, to extent reasonably possible, a working landscape approach to their implementation.

Levee System Integrity – The development of Lower San Joaquin Flood Improvements and North Delta Flood Control and Ecosystem Restoration Improvements Program are expected to involve levee improvements in the Delta and involve coordination with the Levee System Integrity Program.

Funding

Conveyance ¹ (\$ in millions)	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Grand Total
State ²	\$23.5	\$33.2	\$40.6	\$15.6		\$113.0
Federal ³	\$3.0					\$3.0
Water User ⁴	\$26.1					\$26.1
Available Funding Total	\$52.6	\$33.2	\$40.6	\$15.6		\$141.7
Projected Needs Estimate ⁵	\$97.9	\$106.3	\$221.6	\$243.4		\$669.2
Original ROD Estimate (Aug, 2000) ⁶	\$170.0	\$110.0	\$48.0			\$328.0

Conveyance¹ (\$ in millions)	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Grand Total
State ²	\$7.8	\$30.0	\$9.0	\$12.0	\$23.5	\$33.2	\$40.6	\$15.6	\$171.9
Federal ³	\$2.0	\$5.1	\$4.0	\$2.2	\$3.0				\$16.3
Water User ⁴	\$8.4	\$6.8	\$12.2	\$26.1	\$26.1				\$79.5
Available Funding Total	\$18.7	\$39.5	\$25.7	\$41.6	\$52.2	\$33.2	\$40.6	\$15.6	\$267.2
Projected Needs Estimate⁵	\$25.0	\$61.0	\$145.0	\$188.0	\$97.9	\$106.3	\$221.6	\$243.4	\$1,088.2
Original ROD Estimate (Aug, 2000)	\$25.0	\$61.0	\$145.0	\$188.0	\$170.0	\$110.0	\$48.0		\$747.0

NOTES:

1. Funding for Years 1 - 4 reflect actual State, Federal and Local obligations, commitments, encumbrances and expenditures updated to reflect actual fund amounts for each task. State funds for Years 4 & 5 reflect the Governor's Budget May Revision. Federal funds are the Year 5 enacted. Projected funding shown in Years 6 - 8 includes remaining estimates for State bond funds, ongoing State base funding, and local matching to grants for years where bond funding is available. Federal appropriations beyond Year 5 are unknown.

2. The State budget includes funding for the California Bay-Delta Authority (Authority), Department of Water Resources (DWR), and the Department of Fish and Game (DFG).

3. The Federal budget amount represents U.S. Bureau of Reclamation (Reclamation) funds. Amounts shown for the task of Tracy Fish Test Facilities in years 1-3 includes CVPIA, Restoration Funds. In addition, the total Reclamation Funding for Conveyance W&RR, in-lieu of Bay Delta Funds is \$3 million. This amount includes Technical Assistance to the State and Administration of all Categories. Since this amount can be allocated to any or all of the Conveyance tasks, it is currently shown in Oversight.

4. Water User funding includes State Water Project Funds and CVPIA Restoration Funds that are collected from state water contractors and Central Valley Project water users, but are budgeted and appropriated through the federal and state governments.

5. The Projected Needs Estimates are based on funding targets from the 10-year finance plan (July 2) and may change based on completion of the plan in November 2004. Projected Needs Estimates include estimates for design and construction through Year 8.

6. Original ROD Estimates represents the original Stage 1 (Years 1-7) funding estimates from the Record of Decision (Aug 2000).

Funding By Task

Conveyance ¹ (\$ in millions)	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Grand Total
1) 8,500 cfs - Permanent Operable Barriers	\$3.7	\$0.9	\$4.8	\$17.5	\$14.2	\$26.6	\$29.4			\$97.1
2) Clifton Court Fish Screens / 10,300 cfs		\$0.2	\$0.7	\$0.8	\$1.9	\$1.8	\$5.5	\$7.5	\$7.5	\$20.0
3) Tracy Fish Test Facility	\$2.0	\$25.0	\$4.0	\$0.0	\$1.0	\$0.8	\$0.1	\$0.1		\$48.8
4) Lower San Joaquin Flood Improvements		\$0.1	\$0.1							\$0.2
5) Delta Cross Channel Re-operation	\$0.03	\$0.4	\$0.6	\$0.7	\$0.5	\$1.0	\$1.0	\$1.0	\$0.5	\$8.7
6) Through Delta Facility	\$0.03	\$0.2	\$0.6	\$2.4	\$1.5	\$2.0	\$2.0	\$1.0	\$0.5	\$20.1
7) North Delta Flood Control & Eco.Restor. Improvement Program		\$1.0	\$1.3	\$0.7	\$0.5	\$0.5	\$0.5	\$0.5	\$0.5	\$4.9
8) Delta Mendota Canal / California Aqueduct Intertie		\$0.2	\$1.0	\$1.0	\$1.0					\$2.2
9) Clifton Court Forebay/Tracy Pumping Plant Intertie						\$1.0	\$1.0			\$0.0
10) Temporary Barriers	\$3.7	\$2.1	\$3.4	\$6.5	\$7.1	\$7.1	\$6.6	\$3.3		\$22.9
11) Oversight, Coordination & Science		\$0.3	\$0.2	\$2.8	\$0.4	\$0.3	\$0.3	\$0.3	\$0.3	\$4.8
Available Funding Total	\$18.7	\$39.5	\$25.7	\$41.6	\$52.2	\$33.2	\$40.6	\$13.7	\$9.3	\$267.2
Projected Needs Estimate ²	\$25.0	\$61.0	\$145.0	\$188.0	\$97.9	\$106.3	\$221.6	\$235.3	\$244.6	\$1,088.2
Original ROD Estimate (Aug, 2000) ³	\$25.0	\$61.0	\$145.0	\$188.0	\$170.0	\$110.0	\$48.0			\$747.0

NOTES:

1. Funding for Years 1 - 4 reflect actual State, Federal and Local obligations, commitments, encumbrances and expenditures updated to reflect actual fund amounts for each task. State funds for Years 4 & 5 reflect the Governor's Budget May Revision. Federal funds are the Year 5 enacted. Projected funding shown in Years 6 - 8 includes remaining estimates for State bond funds, ongoing State base funding, and local matching to grants for years where bond funding is available. Federal appropriations beyond Year 5 are unknown.

2. The Projected Needs Estimates are based on funding targets from the 10-year finance plan (July 2) and may change based on completion of the plan in November 2004. Projected Needs Estimates include estimates for design and construction through Year 8.

3. Original ROD Estimates represents the original Stage 1 (Years 1-7) funding estimates from the Record of Decision (Aug 2000).

Geographical Distribution of Activities

