# SMALL GROUP

# 10/26/99

**DRAFT**
**August 4, 1999**

with revised schedule

# Implementation Plan for Stage 1 Actions, Lower San Joaquin River and South Delta Region

## Introduction

The CALFED Bay-Delta Program is a cooperative, interagency effort of 15 state and federal agencies with management or regulatory responsibilities for the Bay-Delta system. The mission of the Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay- Delta system. The Program is currently nearing completion of the programmatic planning phase, which will culminate with release of a final Programmatic EIR/EIS and a Record of Decision. This will set the stage for Program implementation, which will require the completion of project-specific environmental documentation for discrete sets of related actions, tiered off of the PEIR/EIS.

## Program Implementation

Program implementation will be guided by the implementation plan. The plan focuses on the early years of implementation when needed actions are better known but also reflects a long-term vision for continuing implementation over the next several decades. Implementation will take place in stages, which allows for periodic assessment of success and balance in the program, with opportunities to alter direction and focus as necessary. Proposed actions for Stage 1 of implementation, which is expected to last about 7 years, have been compiled from extensive input from CALFED agencies and stakeholders. They were first circulated for broad public review and comment as part of the Revised Phase II Report, December 18, 1998.

Stage 1 were grouped into bundles for the purpose of achieving regional and programmatic balance, for development of environmental documentation, for establishing Program assurances, for facilitating financing, permitting, and implementation. The proposed bundles were made available for public review and comment since March 1999 through BDAC, CALFED's web site, and as part of the Draft PEIR/EIS released for public review and comment in June, 1999.

## Lower San Joaquin River and South Delta Bundle

Among the 7 bundles proposed by CALFED is a bundle of actions for the lower San Joaquin River and south Delta region to address long-standing concerns with respect to water quality, fisheries, wildlife habitat, and water supply availability.



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In order to expedite Program implementation it is necessary to initiate the project-specific planning process well ahead of the completion of Phase II of the program. Appropriate agency staffing, budgeting, and other resources need to be identified and allocated, and formal environmental documentation needs to be initiated for the highest priority actions. The purpose of this document is to advance this early implementation planning process for the lower San Joaquin River and south Delta region by suggestion an approach to organizing actions into projects and defining their geographic and topical scope, to propose implementation responsibilities for the various CALFED agencies and stakeholder groups, to identify funding requirements, and to lay out proposed implementation schedules.

In this report actions included for the lower San Joaquin River and south Delta region bundle are grouped into 12 distinct projects, ranging from feasibility studies to full EIR/EIS' as shown in Table 1. An overview of the organization is provided by Figure 1; more detail is provided in the descriptions for each project. An overview of the implementation schedule for the entire bundle is provided by Figure 2.

The proposed grouping of actions into discrete projects reflect consideration of project purposes; the expertise and statutory mandates of the various CALFED and local agencies, and the need to create manageable project teams. There is no one correct way to organize this work; it is anticipated that the scope and structure of the proposed projects will be modified as detailed planning gets underway in close coordination with the affected agencies and stakeholders.

**Linkages**

CALFED has recognized the great importance of maintaining close coordination and linkages between various actions to assure balance, efficiency, harmony among various interest groups. By proposing to implement Program actions as a series of discrete projects, rather than a single comprehensive project, CALFED risks losing the very coordination and linkage so important to overall success. At the same time, it is clear from a practical standpoint that project level planning must be broken into manageable units in order to move forward. Therefore, while striking this balance between very large integrated projects and smaller, discrete projects, CALFED must give a great deal of attention to providing the appropriate linkages between individual projects.

Some of the required linkages are already in place as part of the interim Program structure. Policy Group meetings, BDAC meetings, and a large number of stakeholder/agency meetings provide useful for a for communication and coordination on implementation issues. The current budget processes, including federal, state, and local levels, provide further opportunities for coordination and negotiation to achieve a reasonable balance between competing priorities. In addition existing laws and regulations provide a framework for agency decision which can provide strong linkages expressed in terms of permit decisions and other actions.

However, additional linkage and assurance mechanisms need to be carefully considered



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on a case by case basis to assure all agencies and stakeholders that the appropriate balance and coordination will be achieved. Potential additional linkage mechanisms under consideration include contracts, legislation (including bond measures), interagency agreements, and agency directives. CALFED is committed to exploring and implementing the appropriate linkage mechanisms to assure Program integration as implementation proceeds.



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## *Table 1. Proposed Bundling of Early Actions for Project Management Purposes*

Note: The project-level, site-specific environmental documentation and feasibility evaluations must be broken down into manageable, coherent project packages in order to move forward efficiently. The individual projects need to be coordinated to various degrees to assure overall adherence to CALFED goals, and linked appropriately to provide agencies and stakeholders with sufficient assurance that actions are properly prioritized, yet reasonably balanced.

**EIR/EIS: South Delta Improvements Program (1996 Public Draft by DWR and USBR)**
SWP CCFB New Screened Intake
Permanent Barriers at HOR, ORT, and MR
Dredging
Extend and Screen Ag Intakes
Permit interim 8500 cfs and ultimately10,300 cfs, with option for full use of Joint Point of Diversion
Barrier Operations
Monitoring
Mitigation
Settlement Agreement

**EA/IS: Tracy Test Fish Facility (500 cfs) (Underway by USBR and Interagency Groups)**
Construct test facility to develop best available technology approach to Delta fish screening, salvage, and return

**EIR/EIS: Ecosystem and Flood Plain Restoration Associated with the South Delta Improvements Program**
Aquatic and terrestrial habitat restoration actions
Flood plain restoration and management actions
Selected levee and channel modification actions
Agricultural and wetland diversion screening

**EIR/EIS: Stockton Dissolved Oxygen Solution Alternatives**
Municipal wastewater storage and treatment options
Non-point source reduction measures

**EIR/EIS: Improved Source Water Quality for Rock Slough Intake, CCWD**
Veale Tract Discharge Relocation or treatment
RD 800 discharge relocation or treatment

**EIR/EIS: Agricultural Drainage Management in the San Joaquin Basin**
On-farm drainage management measures



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Irrigation improvement measures
Release of accumulated salts during high flows

**Technical Study: Assessment of sources and Magnitudes of Loadings of Constituents of Concern for Drinking Water**
Identify sources, relative magnitudes, and potential measures for reducing loadings

**Feasibility Study: Recirculation as Tool for Meeting Lower San Joaquin River Flow and Water Quality Objectives**
Recirculation of SWP, CVP Exports

**EIR/EIS: Vernalis Adaptive Management Plan (Completed)**
Secure/provide flows to meet VAMP, ESA, and WQCB Objectives

**IS: Temporary Barriers Program(Completed by DWR and Corps. May need to be renewed)**
Extend existing temporary barriers program as necessary while permanent facilities are evaluated and implemented

**EIR: Joint Point of Diversion for CVP, SWP (Public Draft EIR on WQCP circulated by SWRCB)**
(Sharing of existing export capacities)

**EIR/EIS: CVP Tracy Pumping Plant Screened Intake Upgrade/Relocation**
Forebay Intertie and Consolidated Screening
Aqueduct Intertie for Operational Flexibility

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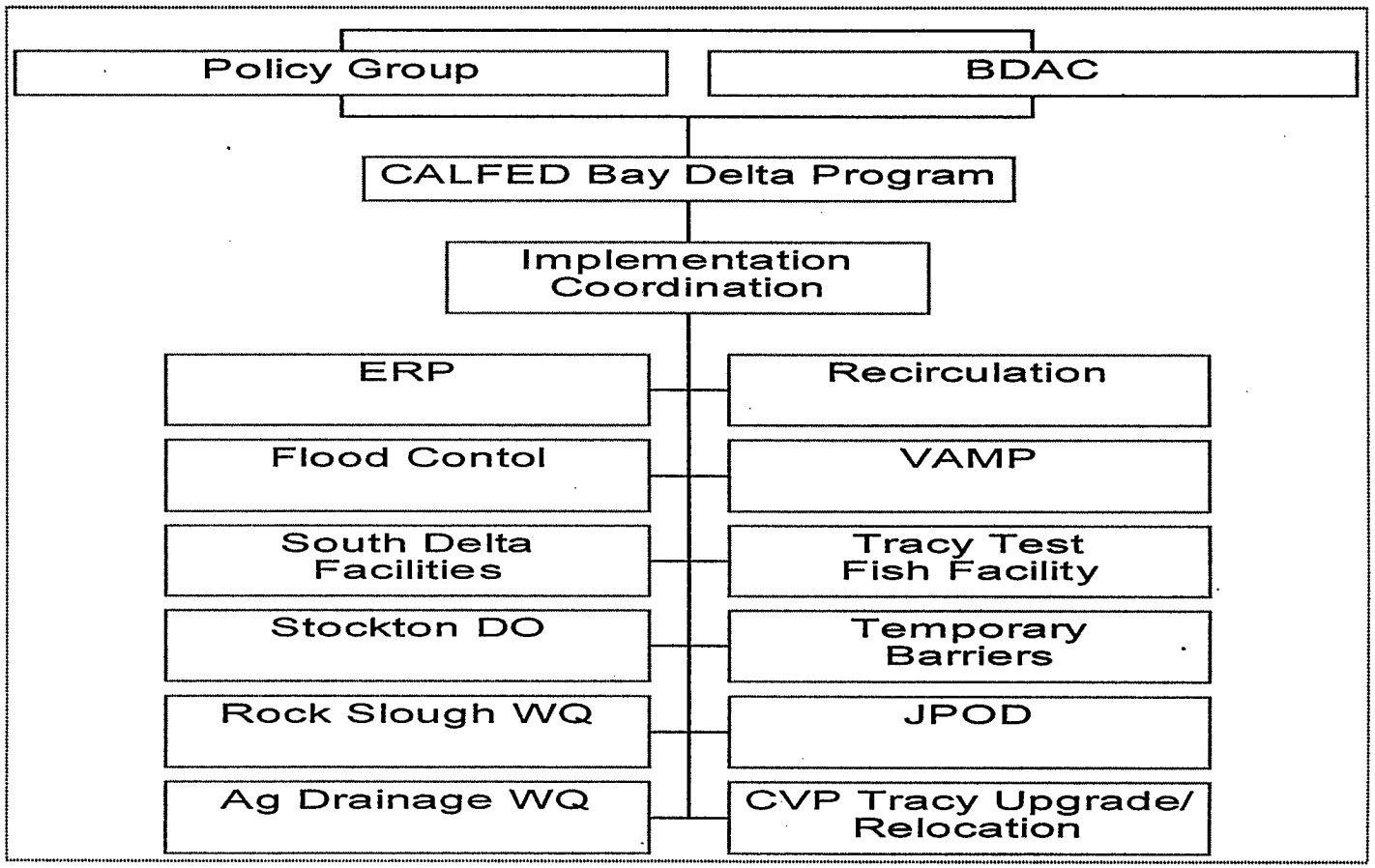
*Figure 1. Implementation Organization For Lower S.J. River, South Delta Bundle*

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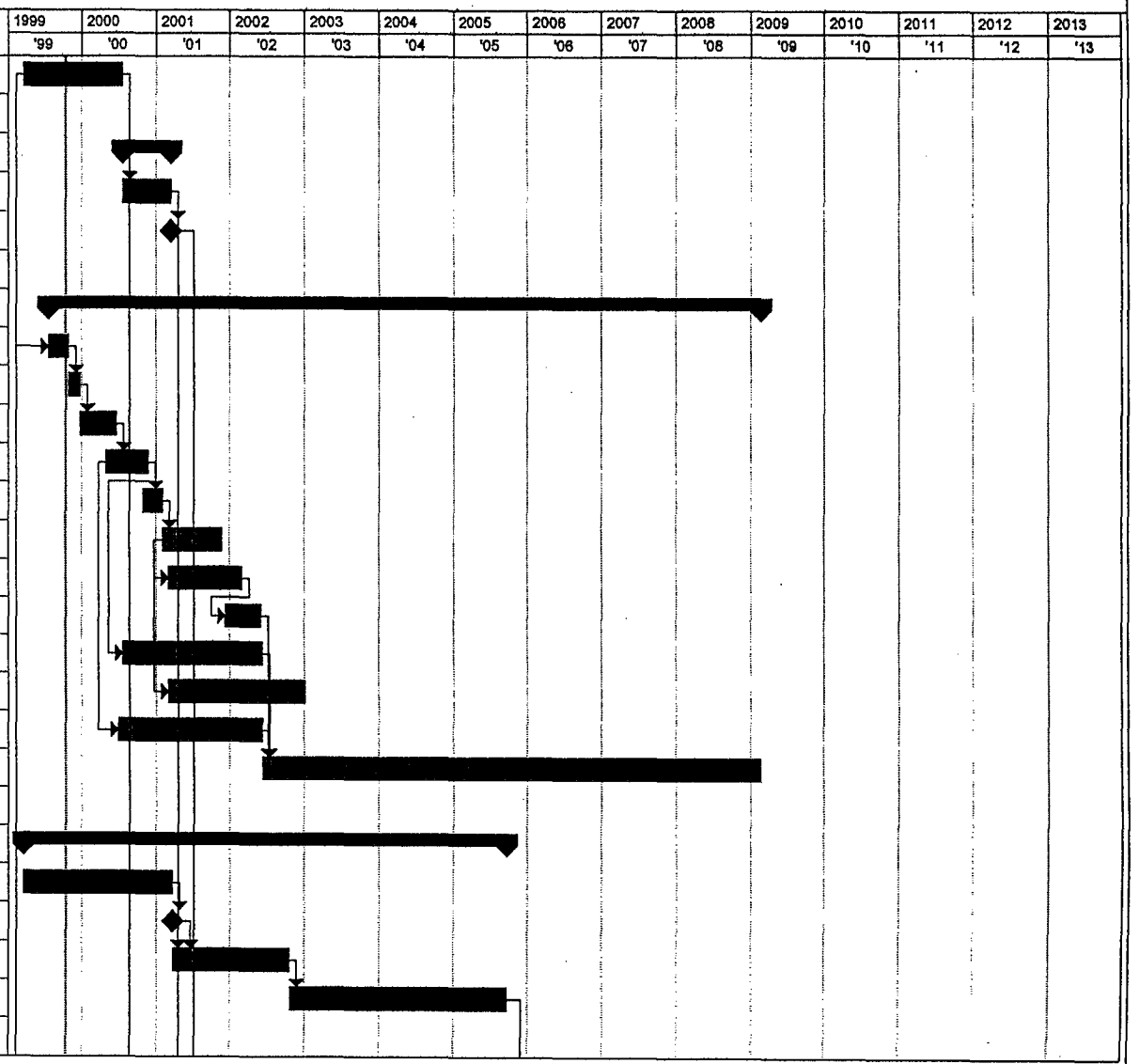
# Figure 1. Draft Implementation Schedule for Stage 1 Actions, Lower San Joaquin River and South Delta Region

| ID | Task Name |
|---|---|
| 1 | ***CALFED Record of Decision*** |
| 2 | |
| 3 | ***South Delta Improvements Program EIR/EIS*** |
| 4 | Complete SDI Tiered EIR/EIS |
| 5 | Banks Pumping Plant permitted for 8500 cfs |
| 6 | |
| 7 | ***Ecosystem and Flood Plain Restoration*** |
| 8 | Project description |
| 9 | Public scoping |
| 10 | Alternatives analyses |
| 11 | Aministrative draft EIR |
| 12 | Public Draft EIR |
| 13 | Final EIR |
| 14 | Mitigation Monitoring Plan |
| 15 | Findings, Notice of Determination & Record of Decision |
| 16 | Project refinement and identify specific project sites |
| 17 | Permitting |
| 18 | Implement near-term projects |
| 19 | Implement longer-term projects |
| 20 | |
| 21 | ***Tracy Test Fish Facility*** |
| 22 | Plan and design 500 cfs Tracy Test Facility |
| 23 | Open bids |
| 24 | Construct 500 cfs Tracy Test Facility |
| 25 | Operate and evaluate 500 cfs Tracy Test Facility |
| 26 | |




Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary

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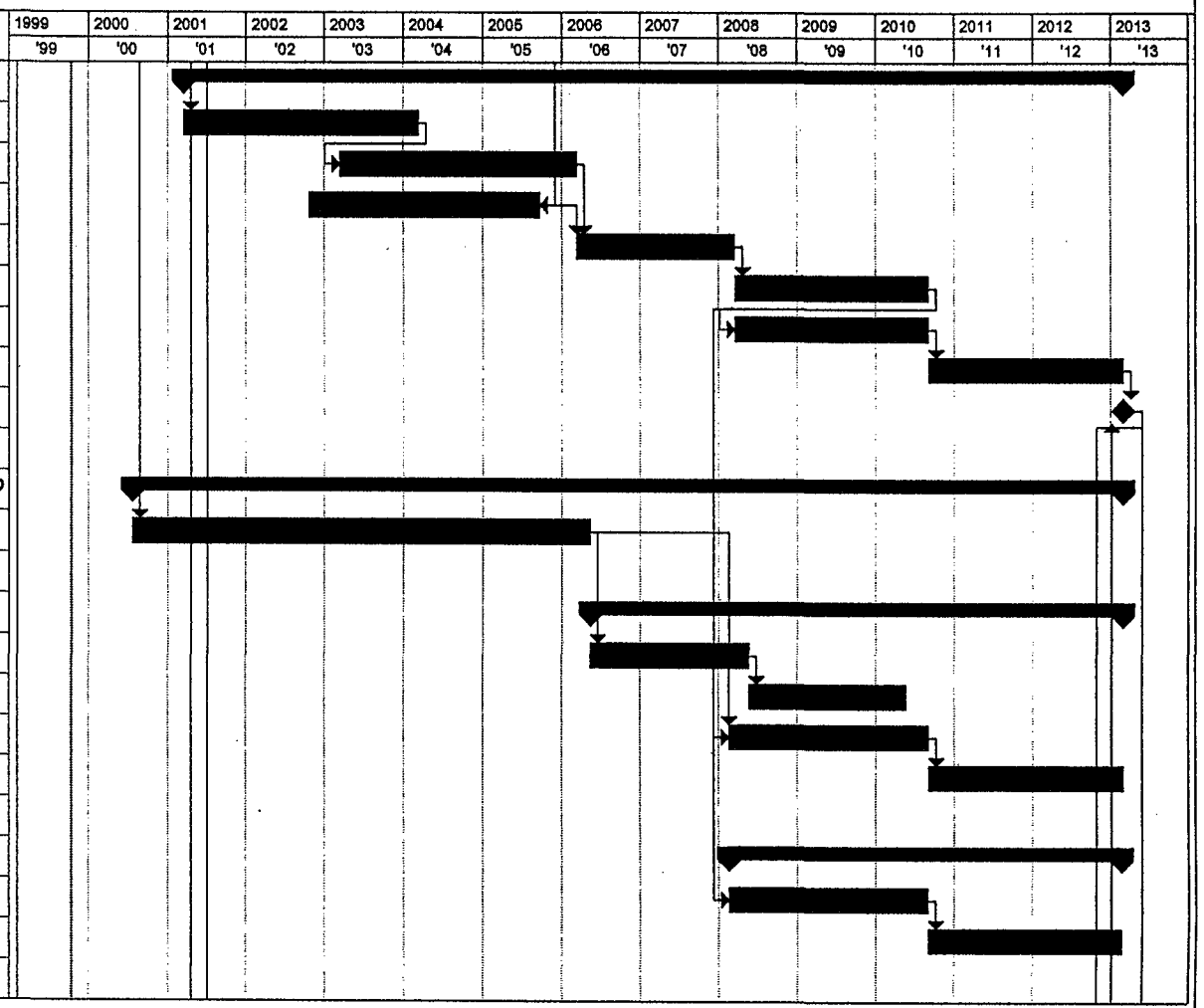
# Figure 1. Draft Implementation Schedule for Stage 1 Actions, Lower San Joaquin River and South Delta Region

| ID | Task Name |
|---|---|
| 27 | *Implement New Fish Screen at CCFB* |
| 28 | Design new intake structure and features |
| 29 | Construct new intake structure and features |
| 30 | Design 2500 cfs CCFB screen module |
| 31 | Construct 2500 cfs CCFB screen module |
| 32 | Operate and evaluate 2500 cfs CCFB screen module |
| 33 | Design 3 add'l 2500 cfs CCFB screen modules |
| 34 | Construct 3 add'l 2500 cfs screen modules |
| 35 | Banks Pumping Plant permitted for 10,300 cfs |
| 36 | |
| 37 | *CVP Tracy Pumping Plant Intake Upgrade/Reloactio* |
| 38 | Plan and EIS/EIR: decide on 1 vs 2 points of diversion |
| 39 | |
| 40 | *Option - Single Point of Diversion* |
| 41 | Design SWP/CVP intertie |
| 42 | Construct intertie |
| 43 | Design add'l 4600 cfs intake+screen module, CCFBs---->14,900 |
| 44 | Construct Add'l 4600 cfs Intake+Screen Module, CCFBs---->14,900 |
| 45 | |
| 46 | *Option - 2 Points of Diversion* |
| 47 | Design 2-2300 cfs Tracy Screen modules ---->4600 |
| 48 | Construct 2-2300 cfs Tracy Screen modules ---->4600 |
| 49 | |




Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary

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# Figure 1. Draft Implementation Schedule for Stage 1 Actions, Lower San Joaquin River and South Delta Region

| ID | Task Name |
|---|---|
| 50 | ***Channel Dredging*** |
| 51 | Permits |
| 52 | Design |
| 53 | Dredging Season 1: Grant Line Canal |
| 54 | Dredging Season 2: Salmon Slough, Nav. & Flood Haz. |
| 55 | Dredging Season 3: Old River, north of intake |
| 56 | |
| 57 | ***Ag . Diversions Extension*** |
| 58 | Permits & Agreements |
| 59 | Design |
| 60 | Construct ag. diversion extensions |
| 61 | New fish screen for diversions |
| 62 | |
| 63 | ***Temporary Barriers Program*** |
| 64 | Continue seasonal operation of temp. Grant Line Canal barrier |
| 65 | Continue seasonal operation of temp. Head of Old River barrier |
| 66 | Continue seasonal operation of temp. Middle River barrier |
| 67 | Continue seasonal operation of temp. Old River at Tracy barrier |
| 68 | |
| 69 | ***Operable Barriers*** |
| 70 | Permits |
| 71 | End temporary Grant Line Canal barrier |
| 72 | |
| 73 | Design Head Old River (HOR) operable barrier |
| 74 | Construct HOR operable barrier |
| 75 | Begin operation of HOR operable barrier |

Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary

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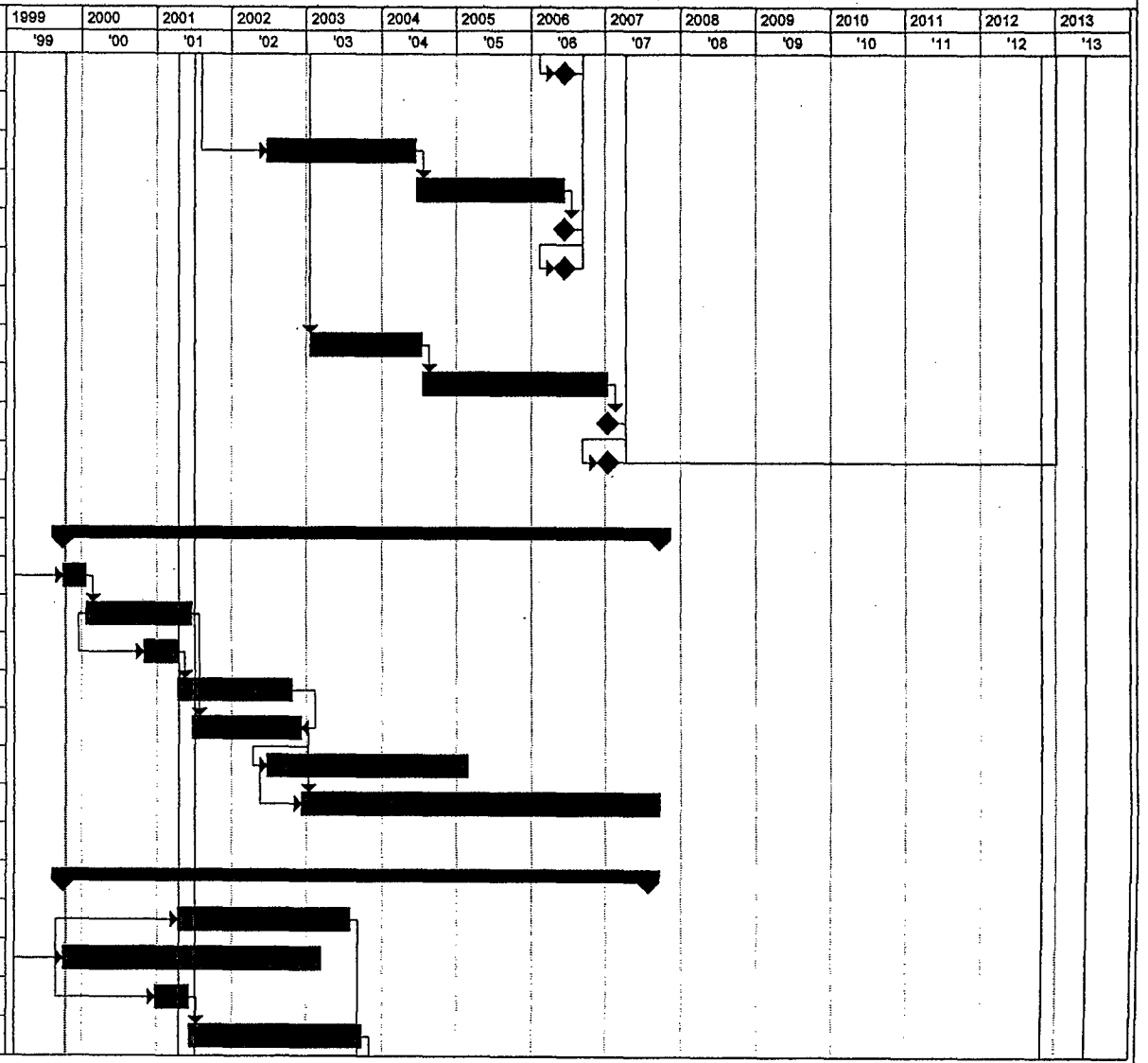
# Figure 1. Draft Implementation Schedule for Stage 1 Actions, Lower San Joaquin River and South Delta Region

| ID | Task Name |
|---|---|
| 76 | End temporary HOR barrier |
| 77 | |
| 78 | **Design Middle River (MR) operable barrier** |
| 79 | Construct MR operable barrier |
| 80 | Begin operation of MR operable barrier |
| 81 | End temporary MR barrier |
| 82 | |
| 83 | ***Design Old River at Tracy (ORT) operable barrier*** |
| 84 | Construct ORT operable barrier |
| 85 | Begin operation of ORT operable barrier |
| 86 | End temporary ORT barrier |
| 87 | |
| 88 | ***Stockton DO Solution Alternatives*** |
| 89 | "Rough Cut" TMDL (identify time & research req.) |
| 90 | *Evaluate potential mitigation measures* |
| 91 | Environmental documentation for test facilities |
| 92 | Implement test facilities as necessary |
| 93 | Participate in final TMDL |
| 94 | Environmetnal documentation for solutions |
| 95 | Solution Design and Implemenation |
| 96 | |
| 97 | ***Ag Drainage Management in the San Joaquin Basin*** |
| 98 | Develop TMDL |
| 99 | Evaluate potential mitigation measures |
| 100 | Environmental documentation for test facilities |
| 101 | Implement demonstration projects and test facilities |




Task | Summary | Rolled Up Progress | Project Summary
Progress | Rolled Up Task | Split
Milestone | Rolled Up Milestone | External Tasks

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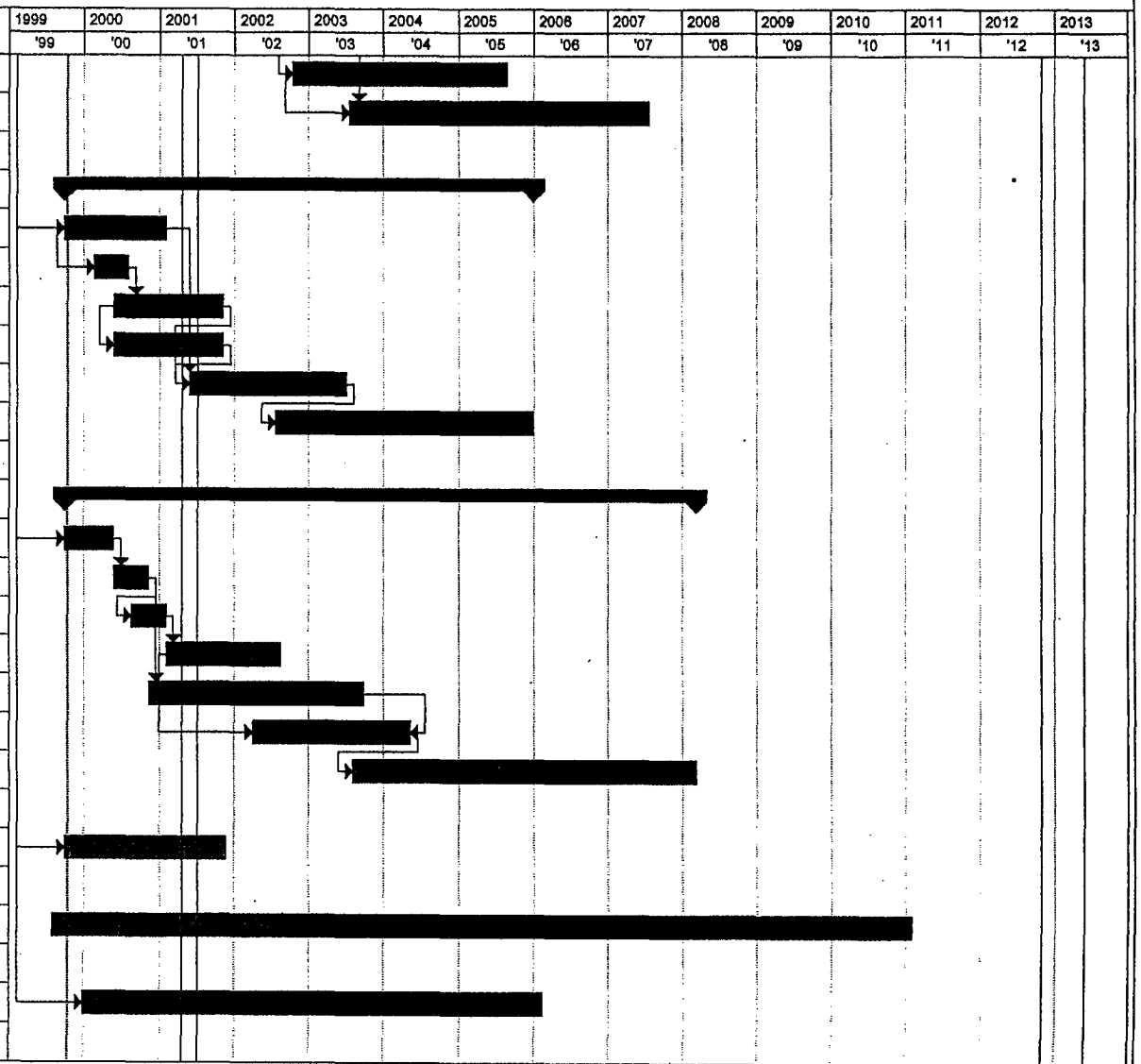
# Figure 1. Draft Implementation Schedule for Stage 1 Actions, Lower San Joaquin River and South Delta Region

| ID | Task Name |
|---|---|
| 102 | Environmetnal documentation for solutions |
| 103 | Solution design and implemenation |
| 104 | |
| 105 | ***Improved Source WQ for Rock Slough Intake*** |
| 106 | Evaluate data on sources and consituent loads |
| 107 | Environmental doc. for near-term solutions |
| 108 | *Near-term solutions (such as diffuser for Veal/Byron drainage)* |
| 109 | Pilot/demonstration projects (such as wetlands for treatment) |
| 110 | Environmental doc. for longer-term (regional) solutions |
| 111 | Longer-term (regional) solution design & implemenation |
| 112 | |
| 113 | ***Assess Drinking Water Constituents of Concern*** |
| 114 | Comprehensive assessment (regional) of sources and loads |
| 115 | Identify monitoring, research and modeling needs |
| 116 | Environmental doc. for near-term solutions |
| 117 | Pilot/demonstration projects and other near-term solutions |
| 118 | Comprehensive assessment and modeling |
| 119 | Environmental doc. for longer-term solutions |
| 120 | Longer-term solution design & implementation |
| 121 | |
| 122 | ***Feasibility Study: Recirculation*** |
| 123 | |
| 124 | ***Implement VAMP*** |
| 125 | |
| 126 | ***Evaluate intertie between SWP/CVP aqueducts*** |
| 127 | |




Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary

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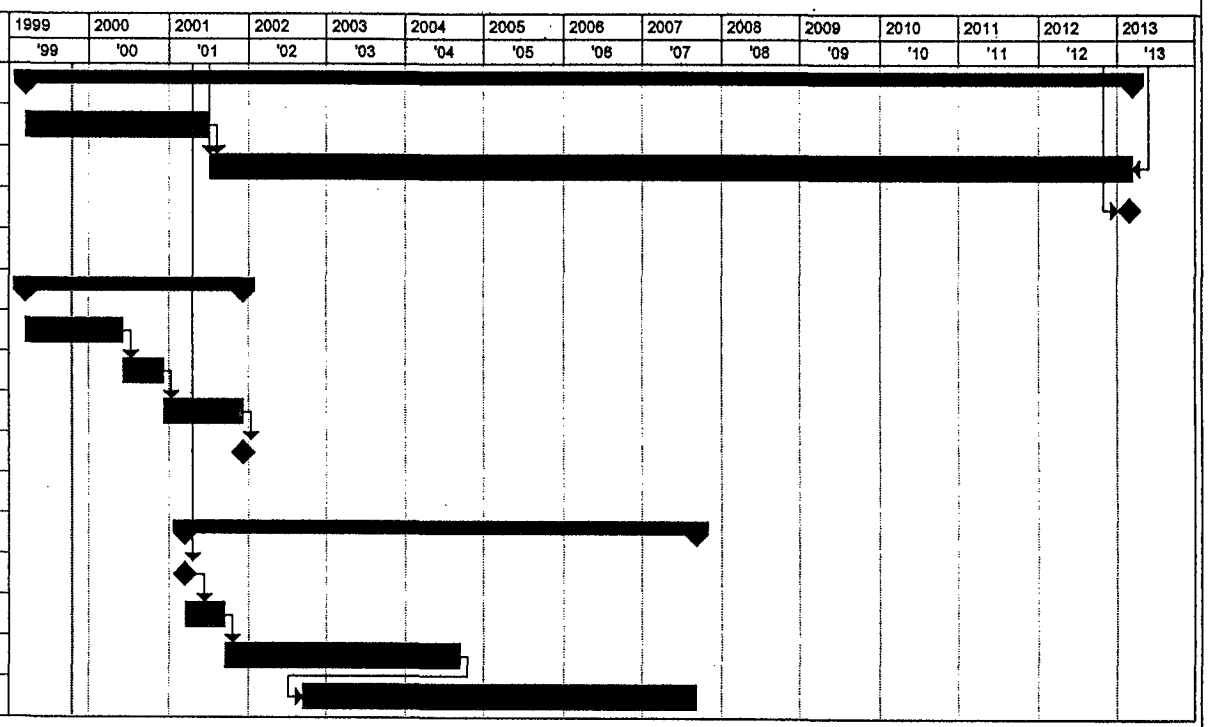
# Figure 1. Draft Implementation Schedule for Stage 1 Actions, Lower San Joaquin River and South Delta Region

| ID | Task Name |
|---|---|
| 128 | ***Joint Point of Diversion (JPOD)*** |
| 129 | Decision |
| 130 | Implement JPOD with 8500 cfs Banks Pumping Plant permit |
| 131 | Begin JPOD with 10,300 cfs Banks Pumping Plant permit |
| 132 | |
| 133 | ***Monitoring*** |
| 134 | Cat. Exemp., FONSI for monitoring |
| 135 | Permits for monitoring facilities |
| 136 | Construct/install monitoring facilities |
| 137 | Begin monitoring |
| 138 | |
| 139 | ***Mitigation*** |
| 140 | Mitigation Plan complete |
| 141 | Permits |
| 142 | Land Acquistion |
| 143 | Habitat Development |




Task | Progress | Milestone | Summary | Rolled Up Task | Rolled Up Milestone | Rolled Up Progress | Split | External Tasks | Project Summary

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## *EIR/EIS: South Delta Improvements Program Facilities*

**Project Purpose**
The purpose of the South Delta Improvements Project is to improve the reliability of existing State Water Project facilities and operations within the South Delta, while ensuring that water of adequate quantity and quality is available for diversion to beneficial use within the South Delta Water Agency's service area; and to contribute to restoring the ecological health of aquatic resources in the lower San Joaquin River and south Delta.

**Project Description**
All proposed alternatives which would be analyzed in detail for the revised draft EIR/EIS would include a new screened intake for Clifton Court Forebay, permits to increase pumping as physical diversion capacity and Delta protective needs allow, channel dredging, agricultural intake modifications, and one or more barriers in Delta channels. Several configurations of barriers would be evaluated in detail, along with the No Action Alternative. The following alternatives would be analyzed in detail in the revised draft EIR/EIS:

- No Action Alternative
- Single Barrier Alternative as evaluated by SDIT (Permanent barrier at HOR)
- Multiple Barrier Alternative as evaluated by SDIT (Permanent barriers at HOR, MR, ORT, and GLC)
- Multiple Barrier Alternative recommended by CALFED Policy Group for evaluation in the PEIR/EIS and project level EIR/EIS(Permanent barriers at HOR, MR, and ORT)

The configuration recommended by CALFED for evaluation in the environmental documentation is described in more detail below:

***New CCFB Intake:*** Construct a new intake for Clifton Court Forebay, most likely at a location on Old River on the southeast corner of Byron Tract.
Construct fish screens and fish salvage facilities for the intake in an incremental, modular approach to achieve the goal of screening the full export capacity of the SWP. Design of these facilities would be guided by an inter-agency management structure and coordinated with development of the 500 cfs Tracy Fish Facility to assure that best available technology and all agency concerns are taken into consideration.

***SWP 10,300 cfs Permits:*** Obtain permits to use full SWP capacity of 10,300 cfs, consistent with all applicable operational constraints (including recommendations for interim 8500 cfs operations), for water supply and environmental benefits, such as implementation of the Environmental Water Account. (It is likely that the Corps permit to use the full SWP capacity would be a temporary one, pending the outcome of CALFED's staged decision-making process for Delta facilities.) Facilitate permitting increased SWP export flexibility up to 8500 cfs with existing facilities and continuation of the Temporary Barriers Program, with appropriate interim constraints.
There shall be no increase of DWR export pumping or changes in operations of Clifton



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Court Forebay that would reduce water levels in any South Delta channel during low tides until modeling is done to predict how such proposals will affect the efficiency and operation of the tidal barrier programs, and South Delta water levels and circulation in general. Such modeling requires that SDWA representatives be involved in the input/assumptions in the modeling, and be able to critique the preliminary results. No increase in DWR export pumping or intake to Clifton Court Forebay during low tides may occur until adequate measures are installed and operating to ensure such changes will not adversely affect South Delta water levels and circulation both upstream and downstream of the barriers.

Joint Point of Diversion will be included in the EIR/EIS to provide full disclosure of a full range of potential impacts of actions recommended by DWR and USBR, including JPOD for interim operations at 8500 cfs maximum export rate, and long-term operations at 10,300 cfs. This evaluation covers incremental impacts beyond the JPOD evaluation conducted by the SWRCB EIR, which only covers JPOD with existing permitted pumping rates.

***Permanent Barriers:*** Expedite construction of permanent operable barriers at the Head of Old River, Old River at Tracy, and Middle River upstream from Victoria Canal. Phase out all temporary barrier installations as these three permanent barriers, dredging, and extension of local agricultural diversions are completed. The GLC temporary barrier would be phased out after completion of Grant Line Canal dredging and extension of agricultural intakes are completed and operational. If impacts to south Delta diverters occur after implementation of the south Delta improvements package, a response plan to mitigate those impacts will be implemented. The plan would include sufficient funds to fully mitigate for impacts on water supply availability for diverters in the south Delta region.

***Channel Dredging:*** Dredge segments of south Delta channels to limit scour velocities induced by project export pumping, to facilitate adequate water supply for local agricultural intakes, and to address local navigation obstructions. This work would be closely coordinated with or conducted by the Corps, given its expertise and historic involvement with Delta dredging projects.

DWR, USBR, and the Corps shall generally designate those channel segments they intend to dredge throughout the south Delta region and the approximate magnitude of such dredging.

It is recognized that the extent of dredging may be modified as detailed bathymetry data and hydrodynamic modeling is refined. Additional dredging may also be implemented subsequent to the initial dredging if required to achieve the desired effect. Future maintenance dredging may also be required to maintain the desired channel hydraulic characteristics. DWR, USBR, and the Corps will diligently pursue such dredging as required.

***Agricultural Diversions Extension:*** Extend and screen agricultural intakes in Grant Line

Canal and the regions west of the proposed barrier locations.

Extend local diversions to assure local water supply availability. Consolidate diversions where feasible and beneficial on a voluntary basis. Modifications to diversion facilities shall only be done in a manner that does not change the existing water right of the diverter or the priority thereof and shall be at no cost to the diverters.

SDWA, with DWR and USBR, will work to secure permits and access from the landowners/diverters. If a diverter has a flood gate and no pump intake, DWR and USBR shall fund appropriate modifications and related operations costs to mitigate for significant residual stage impacts which may occur.

Diversion structures which are modified to address water supply availability concerns shall be screened. The screening facilities shall be installed and maintained at no cost to the diverters.

***Barrier Operations:*** Form a Barrier Operations Coordination Team, consisting of designated staff representing USFWS, NMFS, DFG, DWR, USBR, and South Delta Water Agency to operate the barriers in response to changing fish densities, flows, and water quality changes. The team would be chaired by representatives of the fishery agencies. BOCT would coordinate with the CALFED Ops Group, and employ the same established approach for elevating conflicts which might occur in the course of operations deliberations.

***Monitoring:*** Monitor barrier effects on fish, stages, circulation, and water quality to support real-time barrier operations as well as gather information to support future planning and management decisions. Monitoring also needs to include operations of the new screened intake structure, channel dredging, modifications of agricultural intakes.

***Mitigation:*** Implement mitigation actions for direct and indirect project features and actions through mitigation practices established in the CALFED Program.

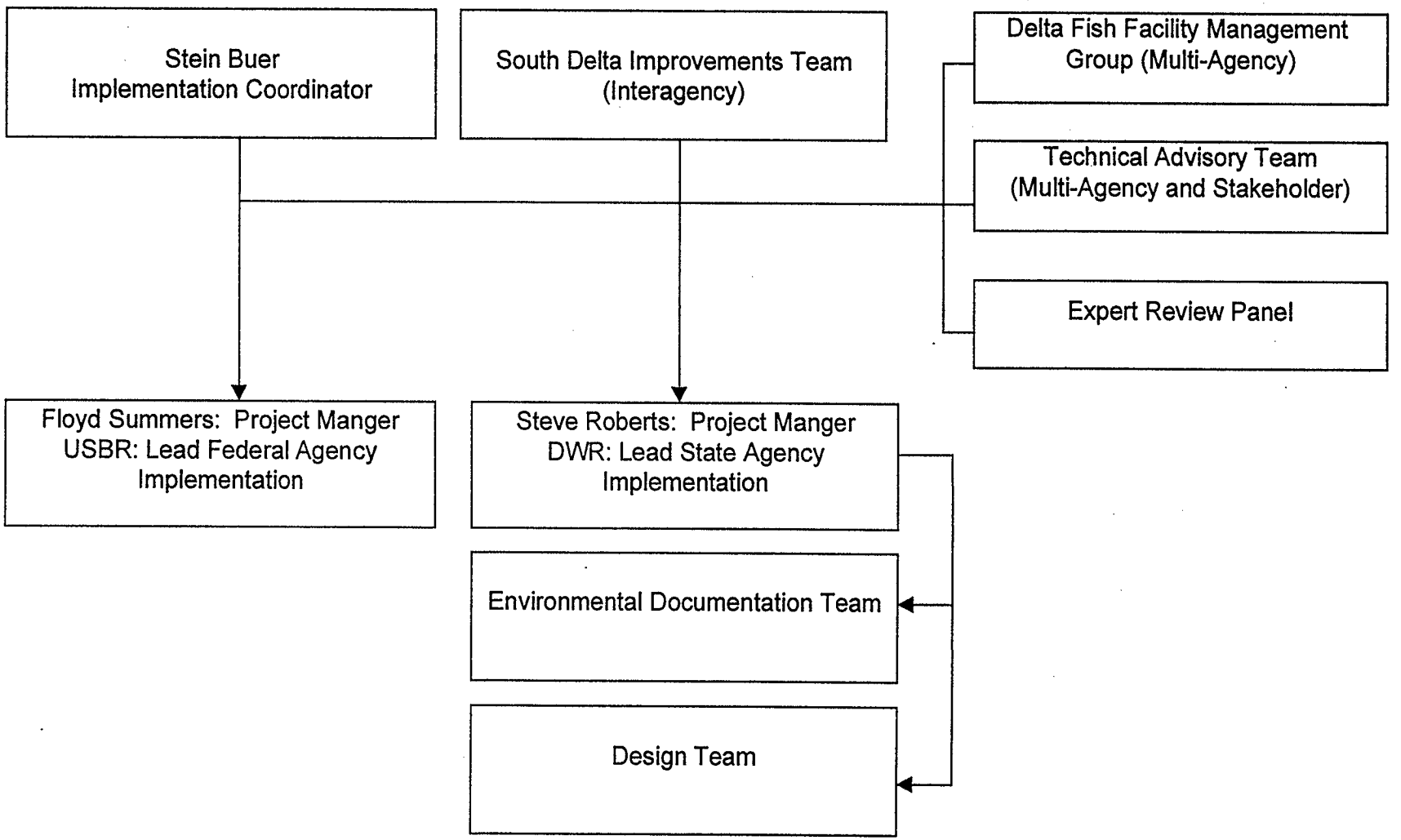
**Implementing Agencies**
Project Management: Steve Roberts, DWR
Lead State agency DWR
Co-Lead Federal Agencies, USBR, Corps

**Required Resources**
Staff is already in place, primarily provided by DWR. Planning effort is costing about $2 million per year.

**Coordination**
See Figure 3.

**Schedule**
See Figure 2.

*Figure 3. EIR/EIS: South Delta Facilities*



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# *EA/EIS: Tracy Fish Test Facility (500 cfs)*

**Purpose**
To develop best available technology screening and salvage for the intakes to the SWP and CVP export facilities, and apply it to screening and fish salvage for the full diversion capacity of the SWP and CVP.

**Project Description**
This project involves design, construction, and evaluation of a 500 cfs fish test facility located at the existing Tracy Fish Facility. The design of physical features and operating procedures will be developed by interagency and stakeholder teams of experts to assure that the best available technology, as well as all agency concerns, are considered in the development process. Because the facility is expected to be constructed on or contiguous with existing screening facilities, environmental impacts are expected to be minimal. As a result, an Environmental Assessment and Initial Study are being prepared to comply with NEPA and CEQA, respectively.

**Implementing Agencies**
Lead federal agency: USBR.
Lead state agency: DWR
Cooperating Agencies: USFWS, NMFS, CDFG,

**Required Resources**
Completion of the design and environmental documentation process is expected to cost about $5.7 million. Construction of the facility and completion of 3 years of testing are expected to cost about $120 million.

**Coordination**
See Figure 4 for the management structure. Design of the 500 cfs Tracy Fish Test Facility (TFTF) and the first screen module for Clifton Court Forebay Fish Facility Project (CCFFF) will be closely coordinated. CCFFF design will not be finalized until after the 500 cfs TFTF is constructed and has operated for several seasons. Preliminary design efforts will proceed concurrently with design of the TFTF, however. Interagency coordination will be structured and facilitated along the same pattern as for the TFTF, with coordination and oversight through IEP and CALFED. A draft agreement for the TFTFP – CCFFFP is included in Appendix A.

**Schedule**
The project planning, design, and environmental documentation process are expected to be completed in late 2000.
Construction is expected to be completed by 2002.
Testing is expected to continue for over 10 years, but information critical to development of the first 2,500 cfs module for Clifton Court Forebay.
See Figure 2 for additional details.



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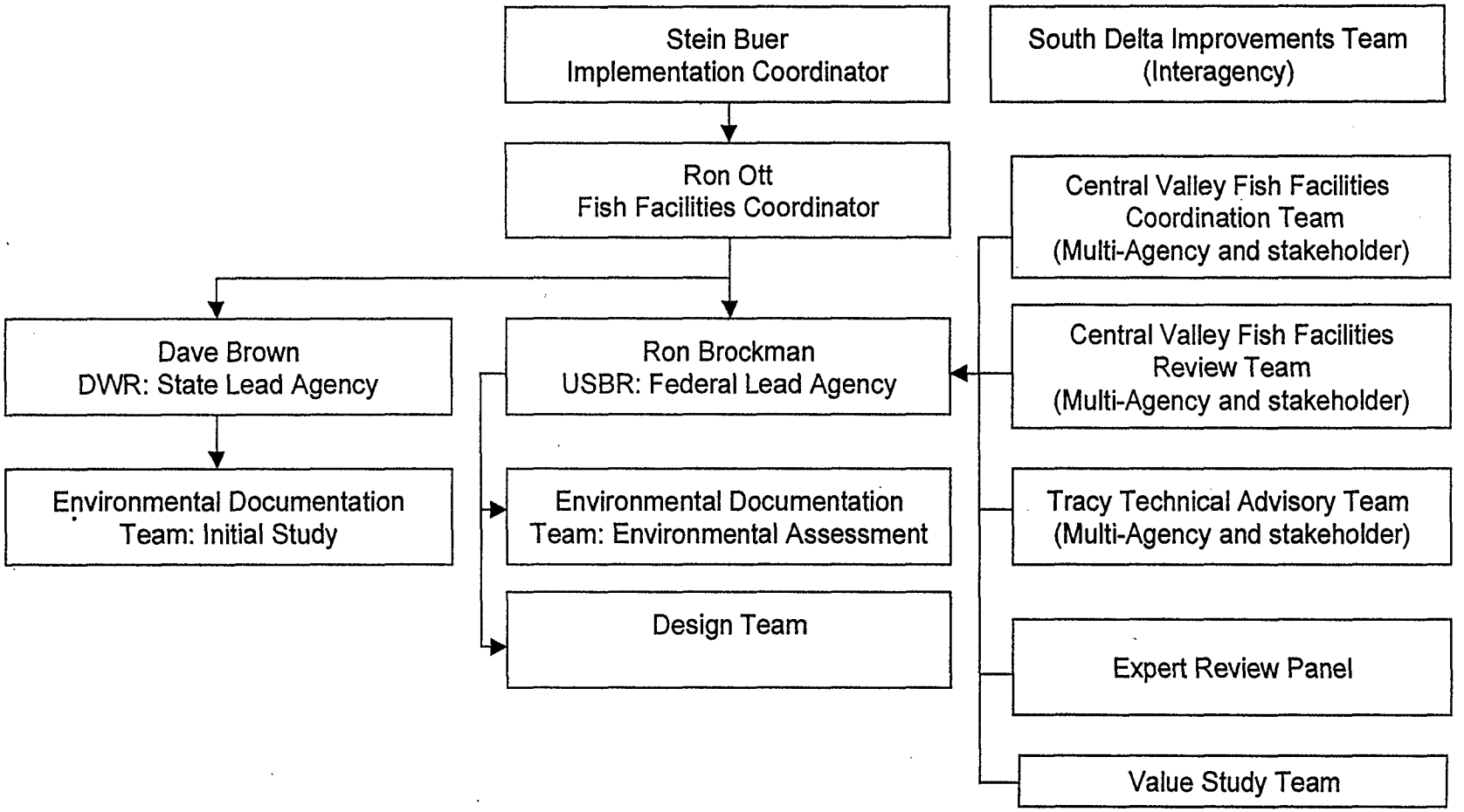
*Figure 4. EA/EIS Tracy Fish Test Facility (500 cfs)*



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## *EIR/EIS: Ecosystem and Flood Plain Restoration Associated with the South Delta Improvements Program*

**Project Purpose**
The purpose of this project is to restore fish and wildlife habitat, restore flood plains, and screen agricultural and wetland diversions in the Bay-Delta in a manner consistent with CALFED's Ecosystem Restoration Program and Multi-Species Conservation Strategy. Restoration actions will be selected to improve ecosystem structure and function in the Bay-Delta and reduce the risk of flooding in the lower San Joaquin River and adjoining channels in the south Delta in view of the facilities and operations proposed for the South Delta Improvements Program.

**Project Description**
At this point, the complete suite of restoration and screening actions associated with this project has not been identified. Some actions will be well defined prior to circulating a draft EIS/EIR. Other actions and alternatives will be defined during or following EIS/EIR preparation. The EIS/EIR will provide the needed environmental documentation for the specific actions that are defined at the time of public review. It will also provide that same documentation at a level that will minimize the need for extensive subsequent environmental documentation for activities that are proposed later but fall within the scope of the original impact analysis. The final project actions would be the result of detailed analyses and collaboration among the affected agencies, a panel of independent scientific reviewers, and stakeholders.

Actions would also be taken in the context of a site specific, comprehensive restoration strategy for fish, wildlife, and plant communities in the south Delta and lower San Joaquin River, in a manner compatible with flood protection goals along the San Joaquin River corridor. These actions would be carefully coordinated with other south Delta actions to ensure that irrigation water supplies to south Delta farmers and circulation would not be adversely affected during low flow periods. In addition to the restoration of large, contiguous areas of fish and wildlife habitat, diversion screening, and an invasive exotic species management strategy would be proposed.

**Agricultural Diversions Screening:** Selected local agricultural diversions would be screened in the south and central Delta and lower San Joaquin River. Diversions would be selected based on priorities established, in part, by an analysis of entrainment data collected early in the project planning stage. A fish screen maintenance program would be initiated. Consolidation and screening of local diversions would be evaluated but would only be done if consolidation does not change the existing water right of the diverter or the priority thereof. Consolidation of agricultural diversions shall only be done on a voluntary basis and at no cost to the diverters. Screening of local agricultural diversions would be advanced in accordance with the process set forth in Chapter IV, Section (C) (1) of the State Water Resources Control Board 1995 Water Quality Control Plan. That process was designed to reduce losses of all life stages of fishes to unscreened water diversions in the San Joaquin River and the Delta. Screening and maintenance of local agricultural diversions under this program would be at no cost to the diverters.

**Implementing Agencies**
The DFG would be the state CEQA lead agency and would be the project manager and project lead for completing the EIS/EIR and ensuring that a project is developed and permitted. The USFWS and NMFS would be the federal NEPA leads. The DFG may also implement specific elements of the project. Some project elements may be implemented by the Department of Water Resources or U.S. Army Corps of Engineers as well as by private landowners, reclamation districts, stakeholders, or non-profit organizations.

**Required Resources**
Project Personnel and Support:

- Project Manager: Senior Biologist Supervisor (Frank Wernette)

- Project Lead: Associate Biologist WL (Mary Dunne)

- Project Support (CVBDB and WHDAB):
  Associate Biologist M/F (Jim Starr)
  Environmental Specialist IV (Scott Cantrell)
  Associate Biologist WL (Kevin Shaffer)
  Fish and Wildlife Assistant 2 (Curtis Hagen)
  Environmental Specialist III (position to be filled)
  Biologist M/F; PI (position to be filled)
  Scientific Aid (2 positions to be filled)

- Project Support (Wildlife Conservation Board): Will obtain appraisals and negotiate and complete any land acquisitions or easements.

- Project Support (USFWS and NMFS): Level of support yet to be determined; at a minimum would serve on fish and wildlife agency coordination team to review, comment, and approve Project documents as required.

- Project Support (DWR): Level of support to be determined. May include operations modeling, DSM2 modeling, and engineering related to levee modifications,

- Project Support (COE): Level of support to be determined. May include levee and channel engineering and floodplain management expertise.

- Project Support (consultants): Ideally, consultants will be hired immediately to assist in public scoping sessions, meeting facilitation, selected chapter preparation, and general support as needed. Consultant participation in this project would decrease or increase depending on how quickly the consultant could be selected and hired and how quickly funding can be provided and new positions established and filled.

**Project Funding**
Refined cost estimates for this planning effort are not yet available. However,



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extrapolating from other Delta planning program costs, they are likely to approach $3 million per year for the first two years and the final year would approach $2 million. Total costs would therefore be approximately $8 million for a three-year. The effort would result in certified environmental documentation and permits for implementation. Actual acquisition and construction costs are not included in this estimate.

This estimate assumes moderate assistance from a consultant, significant work assignments being completed through 1498s with DWR engineering and modeling staff, and assistance from COE staff.

**Coordination**

*Project Reporting:*

All project support staff within and outside of the DFG will receive assignments from, and report to, the Project Lead. The Project Lead will consult with the Project Manager as needed, as well as routinely forward project status reports. The Project Manager will be responsible for overseeing the Project, and will routinely brief Rick Soehren, Regional ERP Implementation Coordinator. Rick Soehren will coordinate with Dick Daniel, ERP Program Manager, and Stein Buer, CALFED, Implementation Coordinator, to assure that the regional ERP project documentation is consistent with other CALFED program elements.

*Program Coordination:*

DFG will ensure that coordination with other CALFED programs occurs during the development of the EIS/EIR and development of project specific actions. Programs of particular relevance are the South Delta Improvements Program, Levee Program, Multi-species Conservation Strategy team, and Comprehensive Monitoring, Assessment, and Research Program.

*Coordination with other Agencies and Projects:*

DFG will ensure that coordination with other agencies such as the California Department of Food and Agriculture, Reclamation Board, Delta Protection Commission, and South Delta Water Agency occurs during the development of the EIS/EIR and development of project specific actions. Coordination with other projects such as the joint Corps/DWR Sacramento-San Joaquin River Basin Comprehensive Study will also occur. Activities will be closely coordinated with specific landowners in the south Delta.

*Electronic Coordination:*

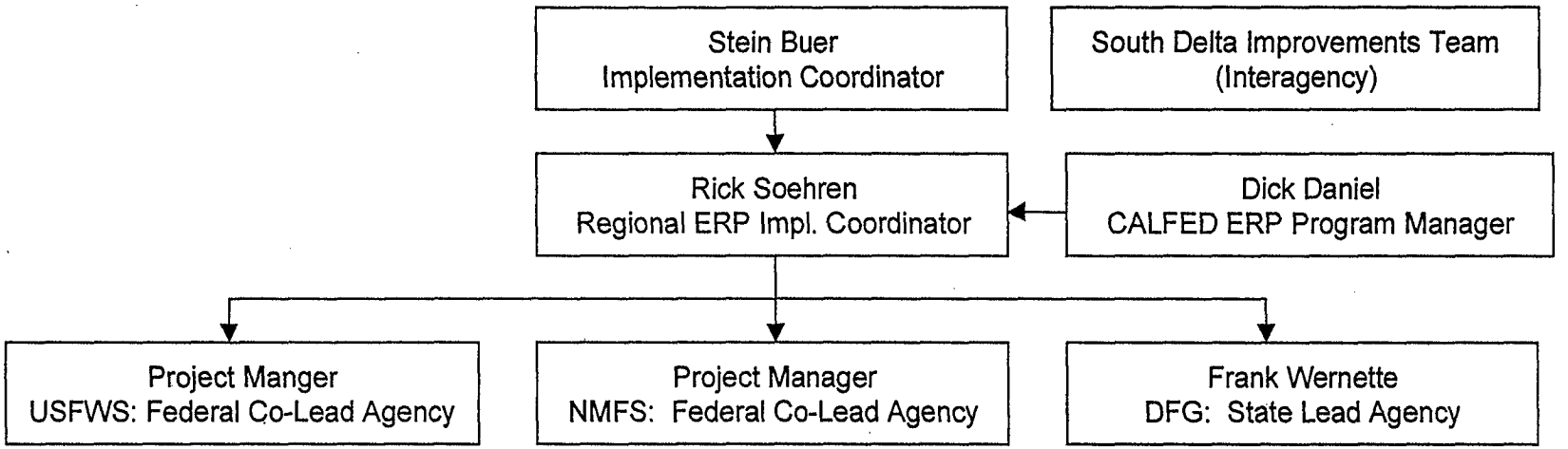
The DFG will develop and maintain a reflector site to facilitate coordination among agencies, independent scientists, and programs. The DFG will also develop and maintain a web site to keep all interested parties informed throughout the environmental documentation and project formulation process.

**Schedule**

In general, the DFG expects that this effort will require a minimum of three years before the final EIS/EIR is certified and selected projects are permitted for implementation.

Land acquisition may occur during the time the EIS/EIR is being prepared. Figure 2 includes a preliminary schedule for these steps. Actual implementation will occur over a five year period following completion of those steps.

*Figure 5. EIR/EIS Regional Ecosystem Restoration Program*




Coordination with
CMARP: Experimental Design
Levee Program
Corps/DWR Comprehensive Study
ERP Science Panel
Multi-Species Conservation Strategy



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## *Stockton Dissolved Oxygen Solution Alternatives*

**Project Purpose**
Improve San Joaquin River dissolved oxygen conditions such that the lower San Joaquin River dissolved oxygen is at all times greater than or equal to the 5 mg/l threshold.

**Project Description**
Evaluate and implement appropriate source control and water treatment actions for the lower San Joaquin River drainage, especially the Stockton area, as described in the CALFED Water Quality Program. These actions are likely to include a range of actions to reduce pollutant loads from non-point sources as well as municipal wastewater storage and treatment options and non-point source reduction measures. The specific actions will be determined based on detailed evaluations of pollutant sources, their relative contributions, pollutant control options, and other factors.

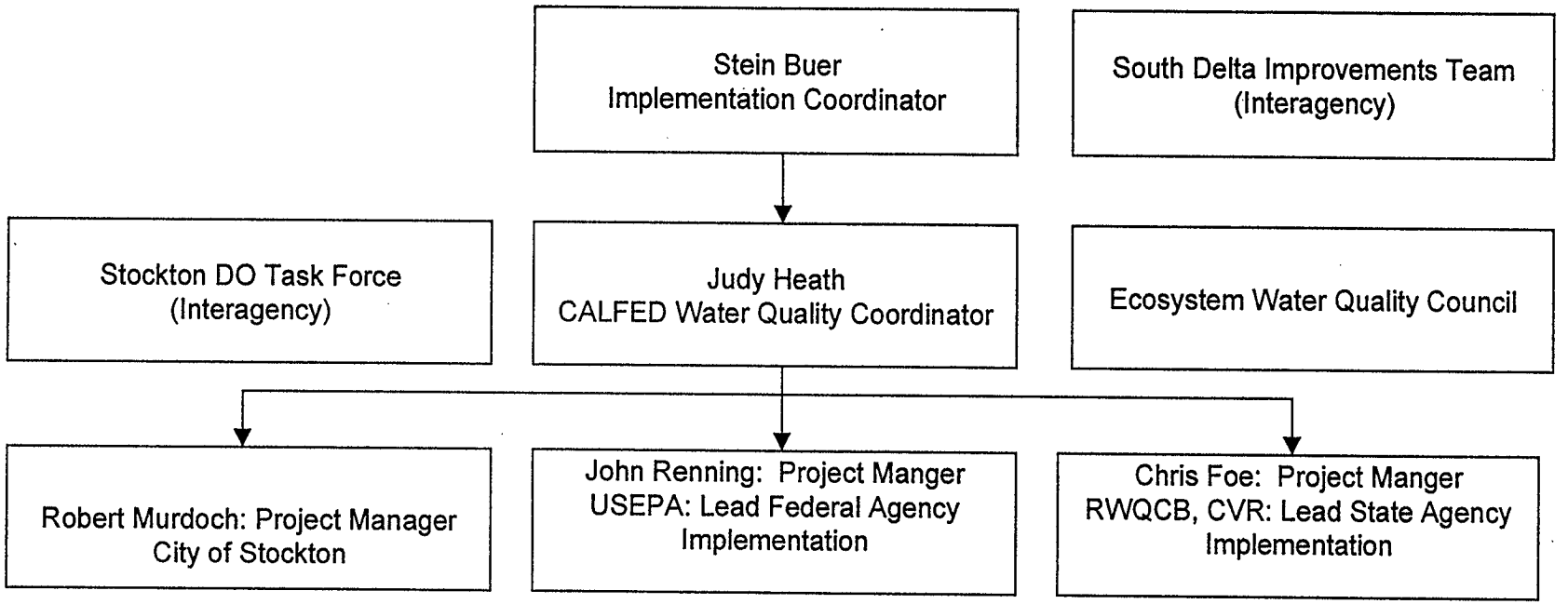
**Implementing Agencies**
A multi-agency task force effort is currently underway to design and conduct the preliminary studies of the causes of low DO in the lower San Joaquin River basin. It is likely that the City of Stockton would serve as the lead agency for preparation of an EIR/EIS. Lead state and federal agencies would be the Regional Water Quality Control Board, Central Valley Region, and the U.S. Environmental Protection Agency. The Corps would also potentially be a lead federal agency, given its role in supporting navigation for the Port of Stockton and its historic role in Delta dredging and channel maintenance activities.

**Required Resources**
Special studies and modeling costs will amount to about $1 million per year for FY 2000 and 2001. There are opportunities for cost sharing with local, state and private entities. Ongoing monitoring should be incorporated to match special study efforts. Ongoing monitoring will serve as indicators of success.

**Coordination**
Water quality actions in the lower San Joaquin River and south Delta region would be coordinated through a Water Quality Work Group (see Figure 6). It would define the scope of the actions, review background information, assess technical and financial feasibility, identify implementing agency, produce implementation plans, and oversee the various projects with an adaptive management process. Each action could deal with a few levels of activities that need to be completed prior to funding the action

**Schedule**
Local and State efforts have begun. Because of limited funding, the local effort is limited in scope and duration. Corrective actions as proposed through the stakeholder process should begin as soon as actions and funds are identified. A preliminary schedule is included in Figure 2.

*Figure 6. EIR/EIS: Stockton Dissolved Oxygen Solution Alternatives*



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## *Improved Source Water Quality for Rock Slough Intake, CCWD*

**Purpose**
Improve source water quality for the Rock Slough intake to the Contra Costa Canal in order to incrementally improve water quality for the Contra Costa Water District service area, particularly with respect to drinking water quality. The goal is to minimize impacts of surrounding agricultural land on the drinking water intake.

**Project Description**
Evaluate and, if demonstrated to be feasible, relocate and/or treat agricultural drainage discharge to reduce impacts on urban water quality (i.e. Veale Tract drainage relocation or treatment, RD 800 drainage relocation or treatment, and others). This includes feasibility studies and environmental impact evaluations.

The Rock Slough intake to the Contra Costa Canal is located in the west central Delta in the vicinity of Knightsen in eastern Contra Costa County. The land surrounding Rock Slough is primarily agricultural. The few residences scattered in the vicinity of the intake are ancillary to agricultural operations. Water levels in Rock Slough are subject to tidal variations, and a typical daily variation is about 3.5 feet. Peaks in Rock Slough salinity are typically caused by seawater intrusion from the San Francisco Bay during periods of low Delta outflow (typically, summer and fall), or by agricultural drainage discharges from the Delta and San Joaquin River during leaching and heavy storms (typically during winters of normal and wet years).

A number of agricultural drains discharge into Rock Slough and Contra Costa Canal. Veale Tract, an area of approximately 1,100 acres, is the largest single land area draining to Rock Slough. Drainage from Veale Tract has been suspected to be the major cause of salinity increases at the District's intake during wet winters. For example, chloride at Pumping Plant No.1 was over 100 mg/L in February and March of 1996 when the chloride level at the junction of Old River and Rock Slough was under 50 mg/L. Agricultural drainage during wet winters can lead to significant increases in the concentrations of dissolved solids, total organic carbon (TOC) and, possibly, pathogens in CCWD's drinking water supply from Rock Slough and at other urban drinking water intakes in the Delta.

Detailed monitoring is already being carried out by the Department of Water Resources (DWR), the Bureau of Reclamation (Bureau), and CCWD at several locations along Rock Slough and Contra Costa Canal. Sampled parameters include EC, chlorides, metals, pesticides, pathogens, and other constituents as part of the D1485 compliance monitoring and the Municipal Water Quality Investigation Program. However, a lack of simultaneous measurements along the length of the two channels does not allow the source(s) of degradation to be identified conclusively.



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**Implementing Agencies**
Project Management: Richard Denton
The lead agency for this planning process would be Contra Costa Water District. Lead state and federal agencies would be the Department of Water Resources, and the U.S. Environmental Protection Agency.

**Required Resources**
Mobilization costs, staff costs, and laboratory costs to perform sampling and generate a conclusive summary of existing conditions and feasibility of treatment of relocation to alternative locations will cost approximately $1.0 million, which is to be expended in FY 2000. Environmental Documentation costs are expected to add about 20% to these cost figures. Relocation costs may be on the order of $ 4.0 million.

Current monitoring should be compared to the additional monitoring needed for the project. Project managers should determine the need for ongoing monitoring in the area, in addition to current monitoring, to provide the necessary information to make appropriate operational changes.

**Coordination**
The CALFED Water Quality Program should oversee the scope of the project. DWR should oversee evaluation of existing conditions and alternative impacts. The US Bureau of Reclamation should be the federal contract authority if necessary. See Figure 7.

CALFED staff would be involved in program development and the results of the study.

**Schedule**
To pinpoint and quantify the sources of salt and other contaminants into Rock Slough and the Canal, simultaneous measurements along a number of locations (up to twelve) between CCWD Pumping Plant No. 1 and the junction with Old River are planned for the late fall/winter of 1999/2000. A preliminary schedule is included in Figure 2.

Sampling alternative drain locations will be done at various times throughout the characterization process.



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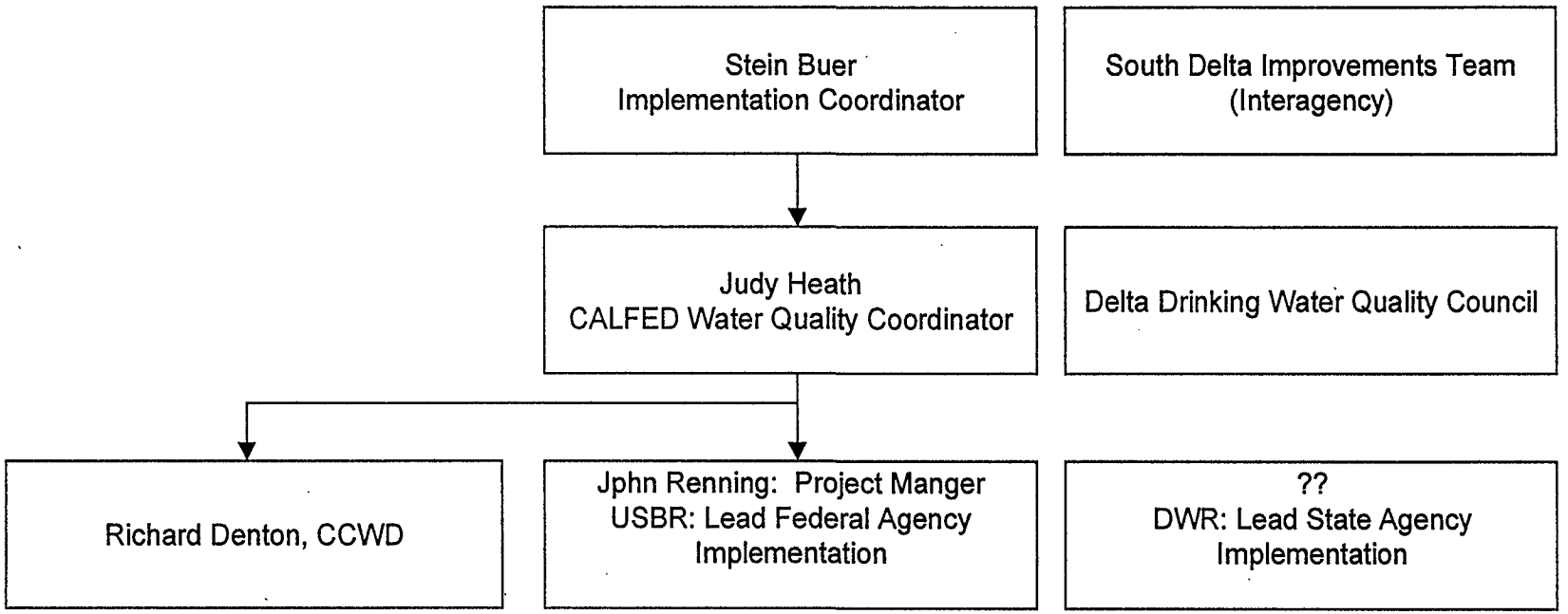
*Figure 7. EIR/EIS: Improved Source Water Quality for Rock Slough Intake, CCWD*



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## *Agricultural Drainage Management in the San Joaquin Basin*

**Purpose**
To reduce pollutant loads and contaminants from non-point and point sources in the San Joaquin River Basin and reduce the impacts on public and environmental health through water quality and water management actions.

**Project Description**
Implement regional, including but not limited to on-farm, environmentally safe drainage management measures and technical programs such as evaporation ponds, drainage treatment and re-use facilities, measures to lower shallow groundwater levels, and other measures and continue to implement existing such programs and measures. These include pilot programs to improve integrated on-farm management of selenium. Provide low interest loans and grants to support implementation.

Implement regional and demonstration projects and cost effective irrigation improvement projects such as drip irrigation, subsurface irrigation, and recycling systems which will reduce discharge and movement of saline water from farms and continue to implement existing such projects. Provide low interest loans and grants to support implementation.

Evaluate, and if demonstrated to be feasible, implement release of accumulated salts during high flow periods. If proven feasible, implement construction of regional and on-farm drainage retention facilities for storage between release opportunities. Provide grants and low interest loans for implementation.

**Implementing Agencies**
Proposed lead federal agency would be USBR. Proposed lead State agency would be DWR. Local water districts would participate as lead local agencies or as cooperating agencies, depending on locations and actions.

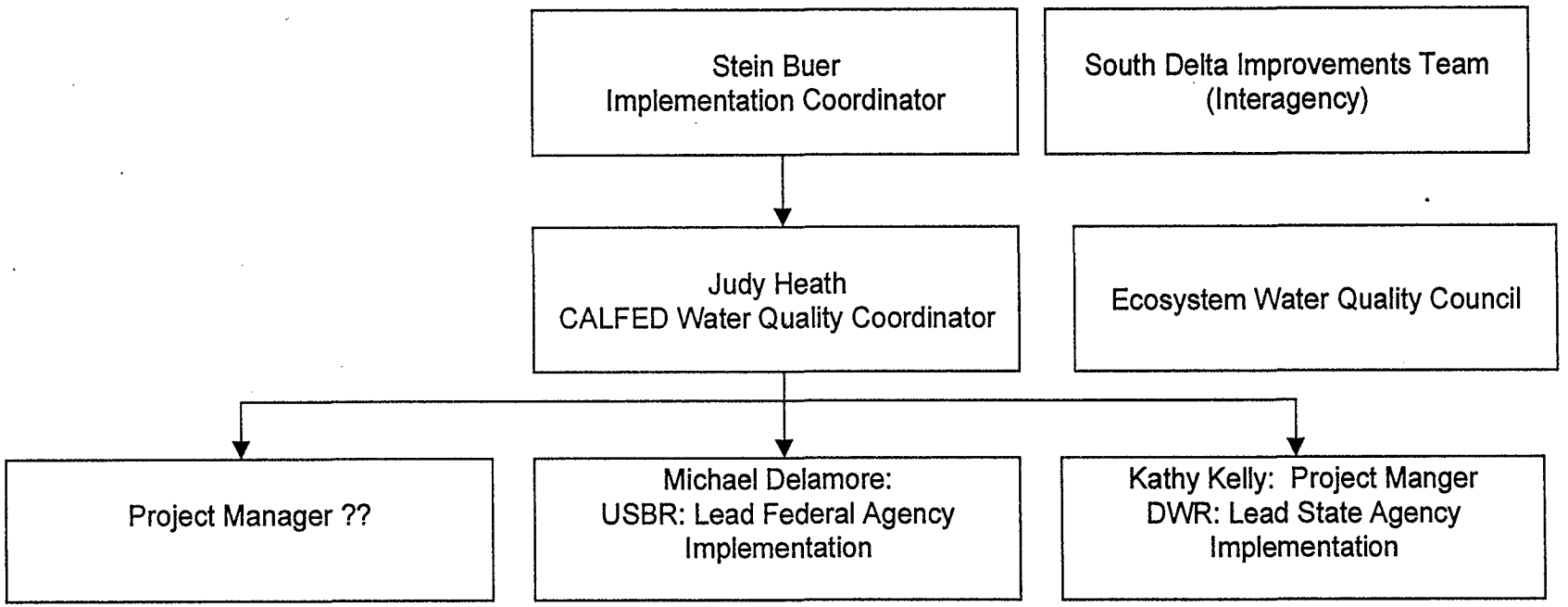
**Required Resources**
Current projections indicate the need for about $0.5 million per year for FY 2000 and Fy 2001.

Monitoring associated with this project should be coordinated with monitoring of related State and Federal agency projects. Monitoring should be designed to indicate relative impacts of project implementation.

**Coordination**
See Figure 8.

**Schedule**
A preliminary schedule is included in Figure 2.

*Figure 8. EIR/EIS: Agricultural Drainage Management in the San Joaquin Basin*

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## *Assessment of Sources and Magnitudes of Loadings of Constituents of Concern for Drinking Water*

**Project Purpose**
Identify sources of constituents of concern for drinking water to evaluate potential for correction.

**Project Description**
Determine sources of drinking water constituents of concern and evaluate potential for reduction. The current list of constituents includes total organic carbon (and dissolved organic carbon) natural organic matter, microbial pathogens, nutrients, total dissolved solids, salinity, turbidity, and bromide. Other constituents may be added as a part of adaptive management.

**Implementing Agencies**
The Department of Water Resources has monitoring and research staff to conduct or contract for studies and other pilot scale projects. In addition, the DWR Bryte Chemical Laboratory or its contract laboratories can perform chemical analysis and quality control. USGS also has scientists for studies and appropriate contract offices. DHS is the primacy agency who have staff to enforce the drinking water regulations in California and the Regional Water Quality Control Board has staff which regulate point and non-point discharges.

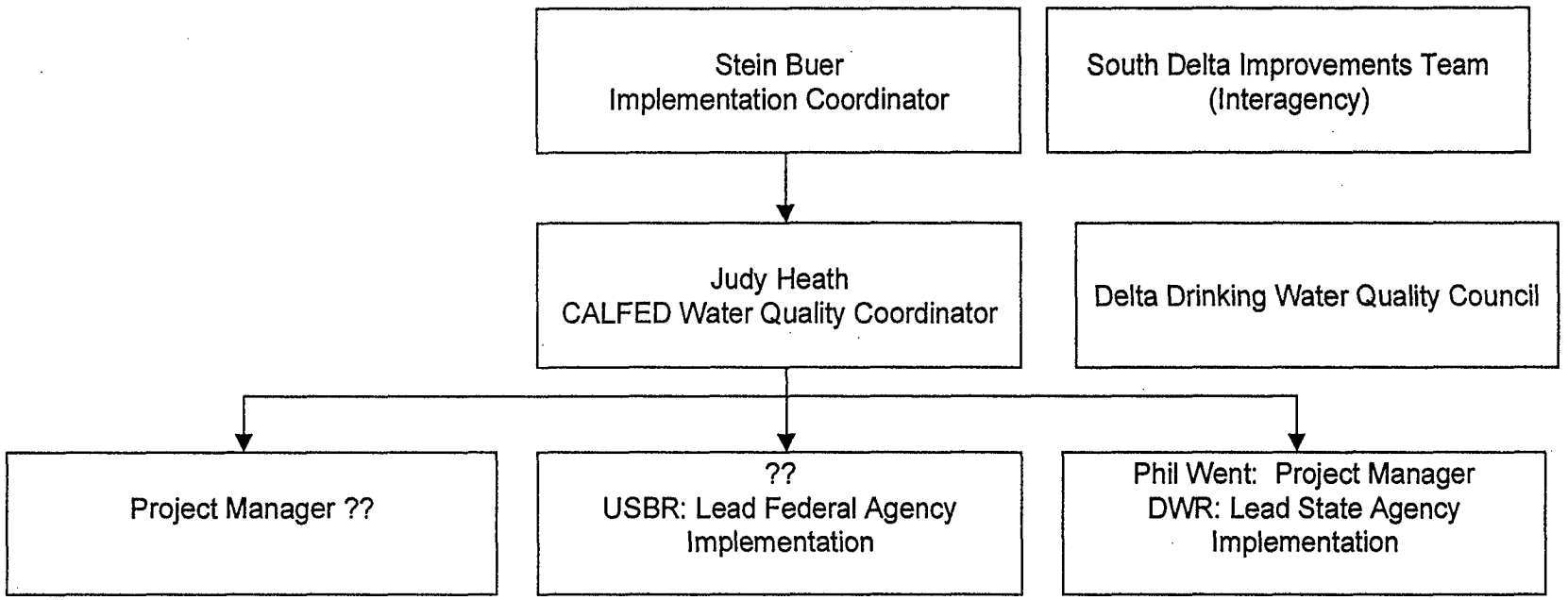
**Required Resources**
Monitoring studies would begin in some critical areas at a cost of about $0.5 million for the first year (FY 2000). As different issues are studied in greater depth, the budget should be increased to $1 million per year for a several years (FY 2001 and following).

Monitoring should be designed to coordinate with special studies (some category III funded) that are also proposed.

**Coordination**
Water quality actions in the lower San Joaquin River and south Delta regions would be coordinated through the CALFED Delta Drinking Water Quality Council (DDWQC). The DDWQC will oversee implementation of CALFED drinking water actions. A technical task group will be formed to define the scope of actions, review background information, assess technical and financial feasibility, produce implementation plans, and make recommendations to CMARP and the DDWQC on adaptive management. CMARP will oversee the monitoring and research components through coordination with the DDWQC. See Figure 9.

**Schedule**
Assessment structure should be designed by mid to late 1999 and studies based on priority structure could begin by January 2000. A preliminary schedule is included in Figure 2.

*Figure 9. Technical Study: Assessment of Sources and Magnitudes of Loadings of Constituents of Concern for Drinking Water*



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## *Feasibility Study: Recirculation as a Tool for Meeting Lower San Joaquin River Flow and Water Quality Objectives*

**Purpose**
Meet lower San Joaquin River flow and water quality objectives while minimizing impacts to existing water users in the basin.

**Project Description**
Evaluate the feasibility of recirculation of water pumped from the Delta by the CVP and SWP to help meet San Joaquin River flow and water quality objectives. Specific technical tasks related to the feasibility study are outlined below:

- Determine hydrologic, hydrodynamic, and water quality impacts of various recirculation alternatives related to the Bay-Delta, with emphasis on the south Delta.
- Determine possible changes in agricultural surface and subsurface flows to the lower San Joaquin River, including data analysis on water quality impacts (i.e. selenium, TDS, and bromides).
- Evaluate implications of proposed recirculation alternatives on estuarine habitats and sensitive species of the Bay-Delta, with emphasis on evaluation of impacts to threatened and endangered species.
- Identify the environmental issues related to biological effects of recirculation operations on lower San Joaquin River fisheries.
- Evaluate the water supply reliability impacts of regulations, and new laws related to the recirculation alternatives on SWP/CVP operations.
- Evaluate potential capital improvement projects related to the recirculation alternative, including costs/benefits analysis.

**Implementing Agencies**
Project Management: Mike Ford/Henry Wong
Lead Federal Agency: USBR
Lead State Agency: DWR
Local: Water Districts and the San Joaquin River Group Association

**Required Resources**

**Coordination**
See coordination discussion for Stockton Dissolved Oxygen Solution Alternatives and Figure 10.

**Schedule**
See Figure 2.



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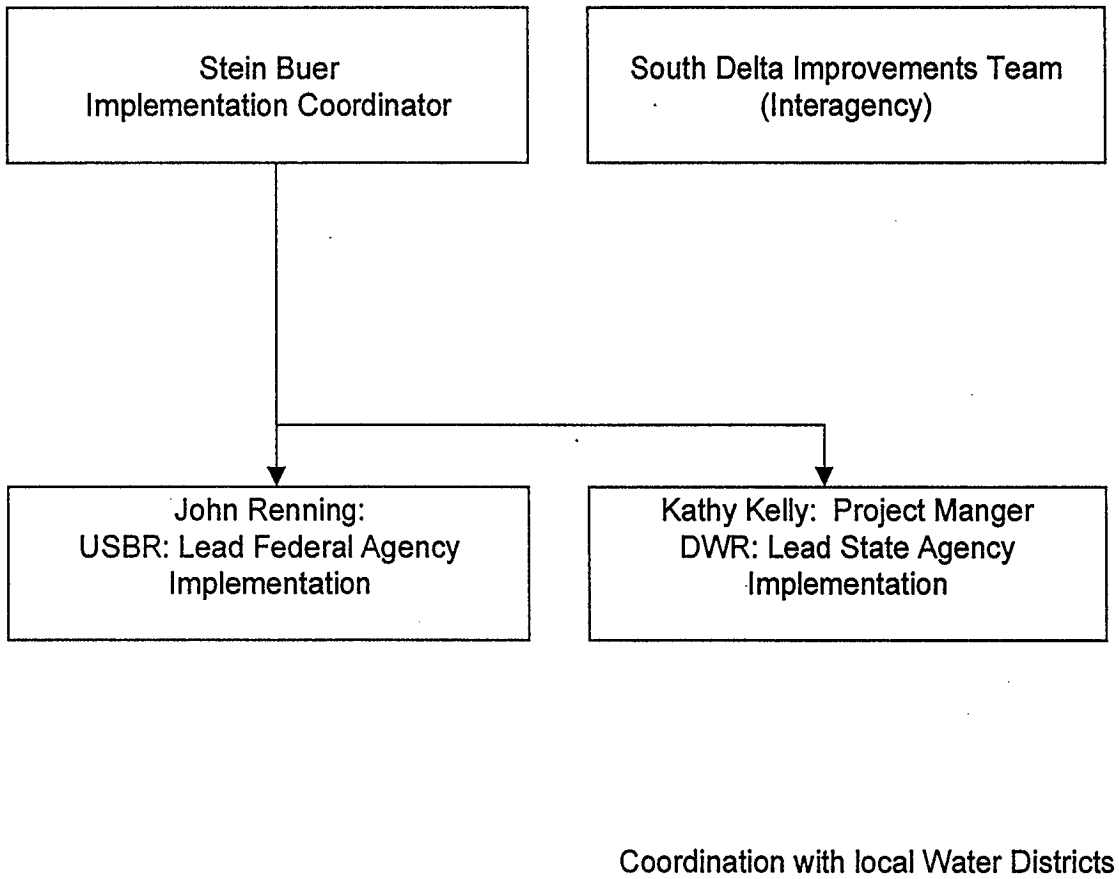
*Figure 10. Feasibility Study: Recirculation as a Tool for Meeting Lower San Joaquin River Flow and Water Quality Objectives*



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# *EIR/EIS: Vernalis Adaptive Management Plan*

**Project Purpose**
To manage sping pulse flows and exports in a systematic pattern which is intended to reveal

**Project Description**
VAMP: Implement the Vernalis Adaptive Management Plan.

Secure and/or provide sufficient water so as to meet the Salinity Objective, the VAMP flows, the USBR's share of endangered species requirements, and the USBR's share of the other requirements of the 1995 Water Quality Control Plan.

The CALFED Ops Group incorporates the annual task of evaluating potential impacts of the implementation of the SJRA. Should any significant water quality impacts be identified, the SJR agreement signatories, in coordination with the Ops Group, will develop a plan to ensure that water quality will not be negatively impacted by the SJRA to a material degree beyond the standards established by the SWRCB, measured by monthly averages. Establish a San Joaquin River Water Quality Protection Reserve Fund to address real-time water quality issues with all available feasible tools.

The funds paid to the San Joaquin River Group Authority under the terms of the San Joaquin River Agreement are intended to be used substantially for enhancing efficient water management within the districts. The funding is established for implementation of conjunctive use and other water efficiency projects that will mitigate potentially significant impacts to agricultural water users and to groundwater conditions. Use of these funds by public agencies will be documented in each agency's annual financial audit report.

The SJRGA has adopted findings pursuant to the California Environmental Quality Act regarding the SJRA which, among other things, commit Oakdale Irrigation District and Merced Irrigation District to implementing conjunctive use and other water efficiency projects to mitigate groundwater impacts associated with the SJRA. The findings also declare funds associated with the SJRA will be used to implement the projects. In addition, other members of the SJRGA have implemented or are planning to implement water efficiency projects consistent with AB 3616 and in coordination with groundwater management plans (AB 3030) and current water supply plans.

**Implementing Agencies**
Project Management: Allan Short, SJRGA
SWRCB
DWR: Kathy Kelly
USBR

**Required Resources**

**Coordination**
See Figure 11.

**Schedule**
See Figure 2.



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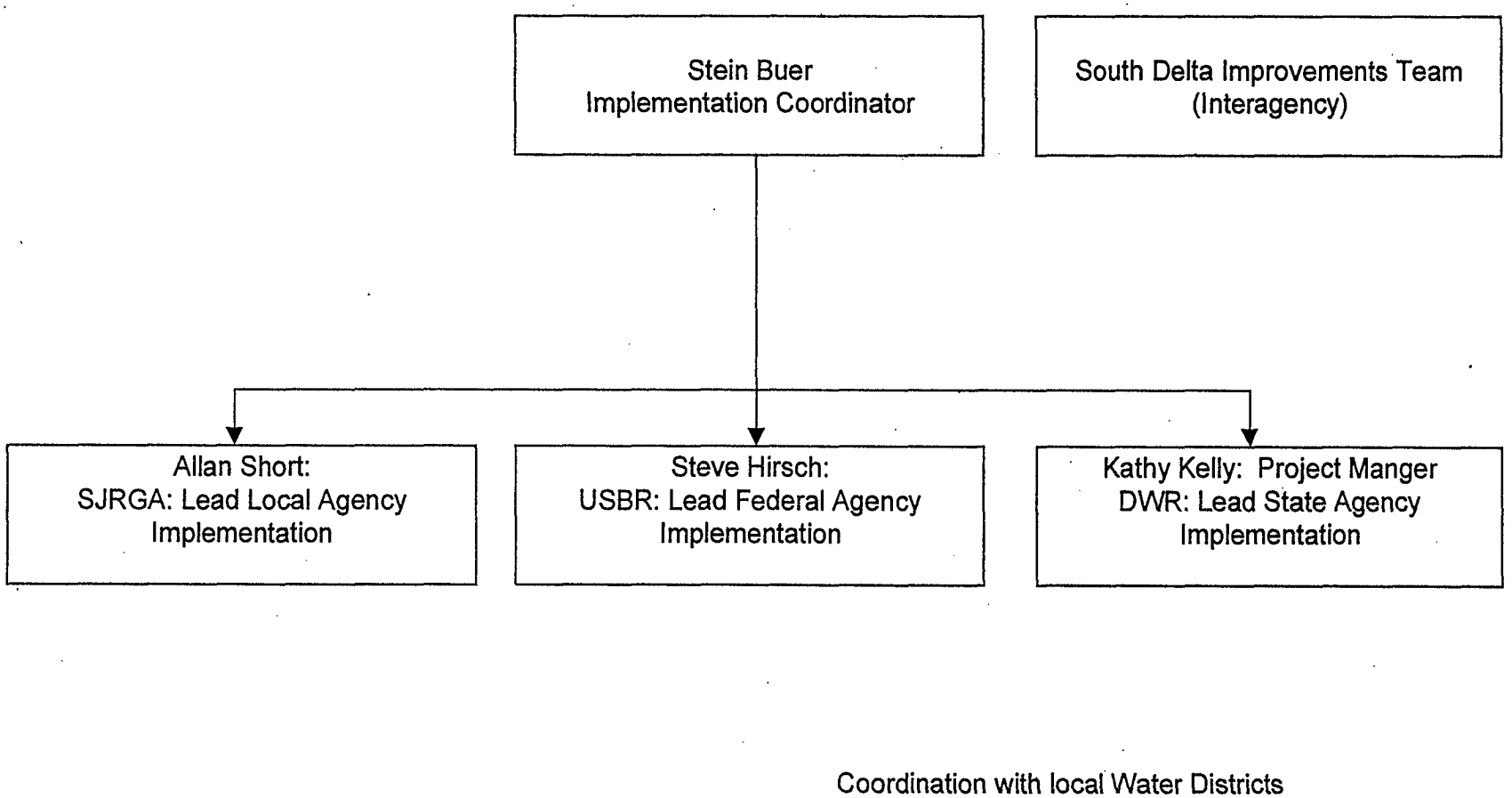
*Figure 11. EIR/EIS: Vernalis Adaptive Management Plan*



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# *IS: Temporary Barriers Program*

**Project Purpose**
To continue permitted implementation of the Temporary Barriers Program until permanent barriers, dredging, and agricultural intake modifications provide alternative means to assure local water supply availability and quality.

**Project Description**
The existing program involves seasonal installation of four temporary barriers, including a fish protective barrier at the Head of Old River, and three barriers to provide for local watger supply availability for agricultural diversions. These are the barriers on Middle River near Victoria Canal, on Grant Line Canal east of Tracy Road, and Old River just upstream of the CVP Tracy Pumping Plant. Operating permits for the existing program will expire after the 2001 operating season. It is anticipated that seasonal installation of one or more temporary barriers will need to continue for several years thereafter, until permanent, alternative features are designed, permitted, and constructed. Therefore, the environmental documentation and permits for the TBP will need to be renewed annually, or less frequently if longer periods are permitted.

**Implementing Agencies**
Lead State Agency and Project Management: DWR, Mark Holdermand
Lead Federal Agency: Corps, Bob Junell
Cooperating Agencies:
USBR

**Required Resources**

**Coordination**
See Figure 12.

**Schedule**
See Figure 2.



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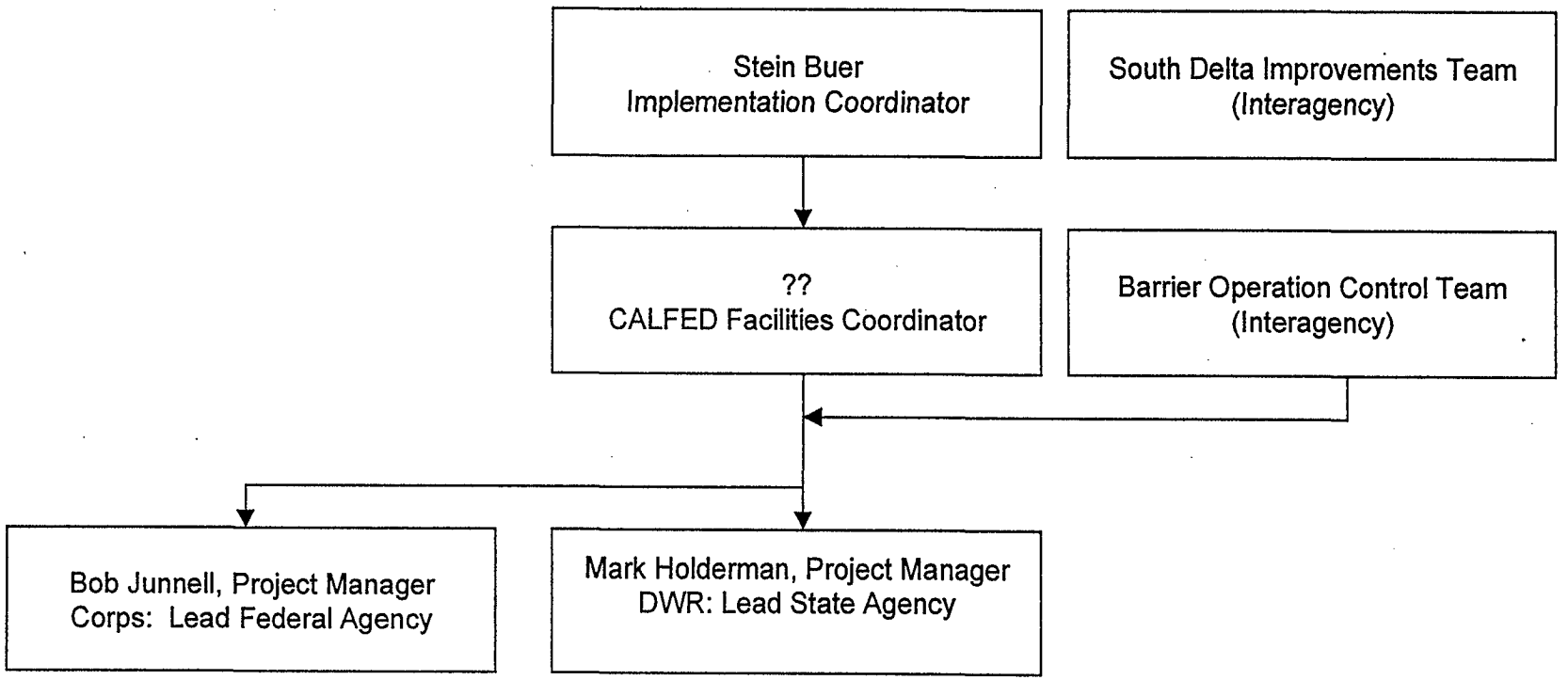
*Figure 12. IS/EA Temporary Barriers Program*




Environmental Documentation
Extended Permits as Required
Barrier Operations



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## *EIR: Joint Point of Diversion for CVP/SWP*

**Project Purpose**
To allow SWP and CVP to share existing permitted pumping capacities to optimize operational flexibility for the benefit of aquatic resources and water supply reliability.

**Project Description**
The USBR has petitioned the SWRCB to add the Clifton Court Forebay as a point of diversion and rediversion in the water rights permits of the CVP and to remove the 4,600 cfs rate of diversion restriction on pumping through the Delta Mendota Canal. To date, the SWRCB has not acted on this petition, but it has included evaluation JPOD in its Recommended Actions in the 1995 Environmental Report (Appendix 1 to Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.

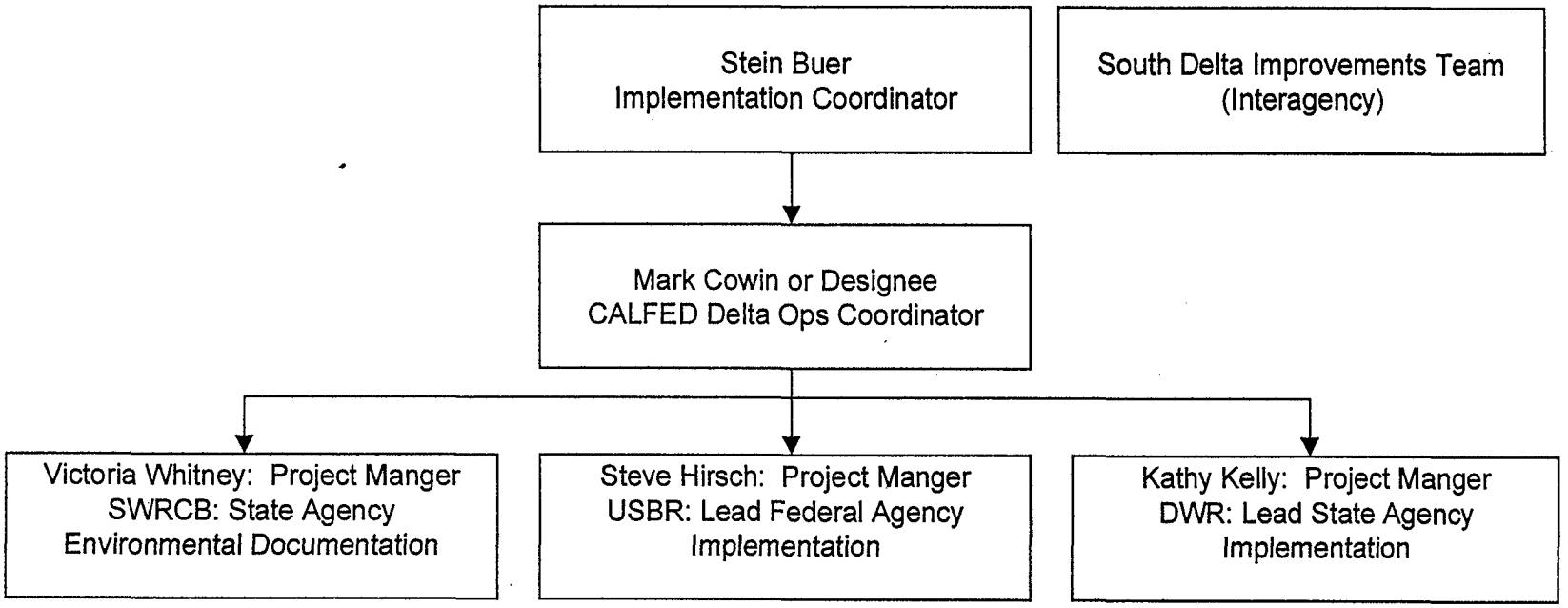
**Implementing Agencies**
Federal Lead Agency: USBR, Project Management:
State Lead Agency: DWR, Project Management: Kathy Kelly
Permit Agencies: SWRCB, CDFG, USFWS, NMFS, Corps

**Required Resources**
Minimal for the time being, to track USBR, DWR, and SWRCB actions on this issue and assure that they are consistent with CALFED objectives. Once the SWRCB hearing on this issue begin, following final adoption of the Water Quality Control Plan, more intensive effort will be required. No new budget actions required at the current time.

**Coordination**
Primarily between USBR, DWR, SWRCB, and CALFED staffs. See Figure 13.

**Schedule**
The SWRCB will consider authorizing combined use of the CVP and the SWP points of diversion and rediversion in the Delta during a separate proceeding following adoption of the Water Quality Control Plan. See Figure 2.

*Fig. 13. EIR: SWRCB Water Quality Control Plan*
*Joint Point of Diversion*

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## *EIR/EIS: CVP Tracy Pumping Plant Screened Intake Upgrade/Relocation*

**Project Purpose**
To optimize efficiency and reliability, as well as reduce impacts of State and Federal Delta diversion facilities.

**Project Description**
Evaluate and decide on whether to retain a separate CVP export fish screen and salvage facility or relocate screen intakes, including possible consolidation with the SWP facilities. Specific technical tasks related to the feasibility study are outlined below:

- Evaluate CVP/SWP intake location alternatives including an intertie between the two pumping plant intakes.
- Evaluate possible intertie between the project aqueducts downstream of the export pumps.
- Evaluate potential intake locations on estuarine habitats and sensitive species of the Bay-Delta, with emphasis on evaluation of impacts to threatened and endangered species.
- Determine hydrologic, hydrodynamic, and water quality impacts of proposed intake locations in the south Delta.
- Evaluate the water supply reliability impacts of intake locations on SWP/CVP operations.
- Evaluate potential capital improvement projects related to CVP/SWP intake locations, including costs/benefits analysis.
- Evaluate plans and regulations on the operations of CVP/SWP export facilities, including institutional arrangements.

**Implementing Agencies**
Project Management: Mike Ford/Ron Brockman
Lead Federal Agency: USBR
Lead State Agency: DWR

**Required Resources**

**Coordination**
See Figure 14.

**Schedule**
See Figure 2.



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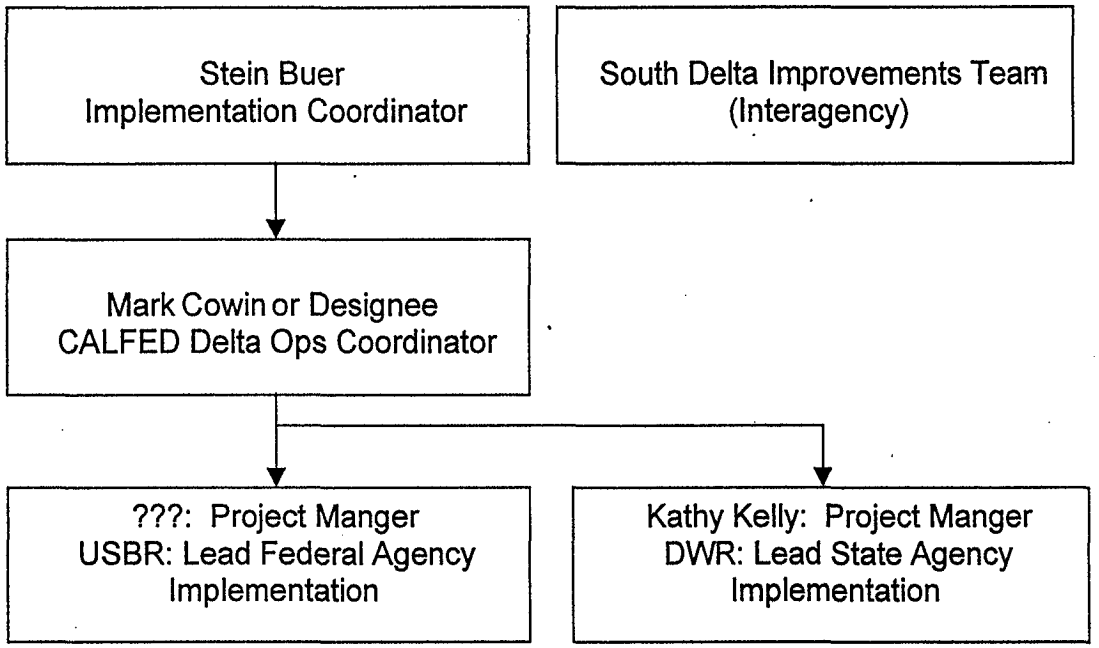
*Figure 14. EIR/EIS: CVP Tracy Pumping Plant Screened Intake Upgrade/Relocation*



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# Project Management Organization Agreement For Tracy Fish Test Facility Project and Clifton Court Forebay Fish Facility Project

**August 3, 1999**

## Purpose

The purpose of this agreement is to facilitate the expeditious planning, design, construction and evaluation of new fish screens and salvage facilities associated with the Tracy Fish Test Facility Project (TFTFP) and the Clifton Court Forebay Fish Facility Project (CCFFFP) (collectively referred to as "Projects"). The TFTFP will develop best available technology screening and salvage for the intakes of the SWP and CVP export facilities, and apply it to screening and fish salvage for the full diversion capacity of the SWP and CVP. The CCFFFP will consist of fish screens and salvage facilities for the SWP intake using an incremental, modular approach to achieve the goal of screening the full export capacity of the SWP. The agreement provides project descriptions and management structure, including administrative protocols.

## Project Descriptions

**Tracy Fish Test Facility Project (TFTFP)** - The TFTFP will provide timely information on critical issues related to new fish protection facilities at Clifton Court Forebay (CCF), and Tracy. Specifically, the TFTFP will build, operate, and evaluate a best available technology facility that will screen a portion of Tracy flows until such time as a decision is made on screening the full Tracy pumping capacity.

This will be a "technology development" facility that is designed and tested for developing "generic" information for solving fish screening, handling, and transportation problems in the Delta while meeting modern fish screening criteria. The technology development will be carried out at both the Tracy site, and Reclamation's research flumes. In addition, cooperative research with UC Davis and their labs will be recommended, especially for refined programs for study criteria with sensitive species such as Delta Smelt.

The new facility will be designed to screen 500 cfs at an approach velocity of 0.2 fps, and will meet all other appropriate fish agency criteria. The facility will be used for fish protection



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research and will have the structural and operational flexibility to optimize screening operations for multiple species in the challenging south Delta environment. The existing facility will be improved and remain in place to screen the remainder of the flow, until a final decision is made to screen the remainder of the CVP flow at Tracy and/or CCF.

Evaluations of the facility will be completed in time to allow expanded improvement of Tracy or new fish facilities at CCF by the end of Stage 1[1]. Six major issues to be evaluated are:

- Debris Management;
- Predator Management;
- Fish Lift Systems;
- Fish Screening, Collecting, Sorting, and Holding Facilities;
- Fish Trucking and Release Improvements; and
- Compatibility with Existing Fish Collection Facilities.

**Clifton Court Forebay Fish Facility Project (CCFFFP)** - The intent of the CCFFFP is to use the best available technology developed from the TFTFP to implement an incremental modular approach to achieve the goal of screening the full capacity of the SWP. The first module will consist of a 2,500 cfs fish screen and salvage facilities with the capability of adding modules to the full SWP capacity of 10,300 cfs. If the future decision is made for one point of diversion at the CCF site for the SWP and CVP, modules would be added to screen the full combined capacity of the CVP and SWP. The most likely location for the facilities is Old River on the southeast corner of Byron Tract.

## Management Structure and Administrative Protocols

Management of the Projects will rely to the greatest extent feasible on existing teams which have been convened to provide guidance on fish screening and salvage activities. The effort will involve the following groups:

- CALFED;
- Central Valley Fish Facility Coordination Team;
- Central Valley Fish Facility Review Team;
- Technical Advisory Teams for Tracy and Clifton Court Forebay;
- Design Teams for both facilities;
- Expert Review Panel;
- Value Study Team for TFTFP;

[1]CALFED's Stage 1 of Phase III will occur during the seven years following the federal Record of Decision and State Certification of the Final Programmatic EIS/EIR projected to occur in mid-2000.



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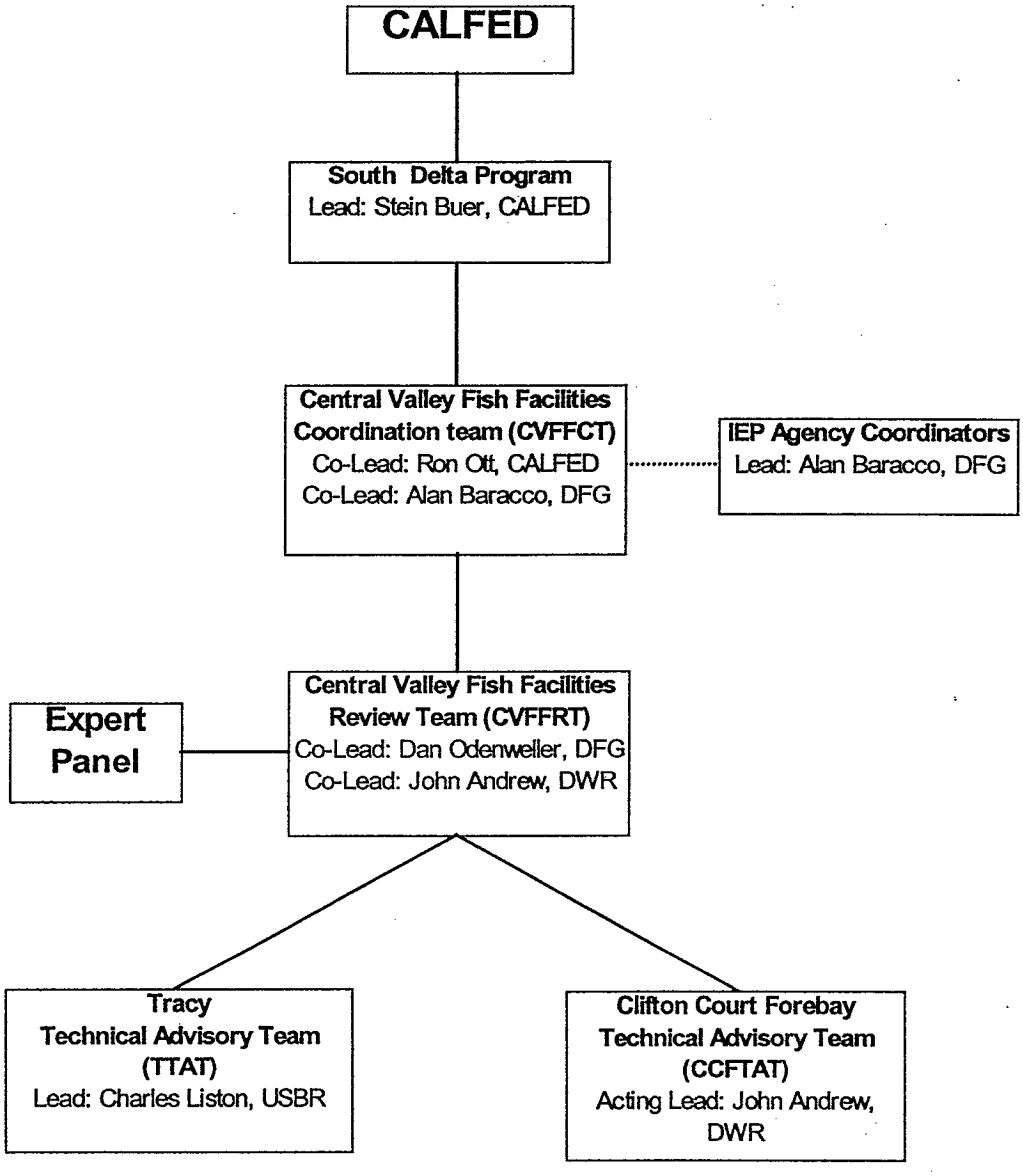
- Construction Team for TFTFP; and
- Evaluation and Testing Team.

**Management Organization Flow Diagram**-The flow of information and decisions between the involved groups is shown below.



**CALFED Bay-Delta Program (CALFED)** - CALFED is a cooperative, interagency effort of 15 state and federal agencies with the management or regulatory responsibilities for the Bay-Delta system. The mission of the Program is to develop a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. Accordingly, CALFED has recommended a bundle of actions for the lower San Joaquin River and south Delta region to address long-standing concerns with respect to water quality, fisheries, wildlife habitat and water supply availability. The TFTFP and CCFFFP are critical parts of this bundle. Many agencies and stakeholders will be involved in the formulation of the design concepts of these Projects. As part of this agreement, CALFED will provide facilitated coordination and design formulation process with appropriate agency and stakeholder representation to assure that all concerns are addressed.

CALFED staff will serve on the technical and management teams and will bring issues that cannot be resolved by the CVFFCT, to the CALFED Policy Group for resolution.

**Central Valley Fish Facility Coordination Team (CVFFCT)** - The CVFFCT is a group under the agency IEP Coordinators. Its mission is, " to facilitate meaningful interagency review and coordination for the Central Valley fish screen and passage initiatives, projects, and research, and to promote awareness and support of such activities by involved stakeholders". The team is normally led by IEP representative Alan Baracco, DFG. During special meetings for the TFTFP and CCFFFP, CALFED's Ron Ott will lead the team.

The CVFFCT will call special meetings for TFTFP and CCFFFP at least twice a year or more frequently at milestones, as necessary. The CVFFCT provides overall management guidance; reviews major findings, conclusions, recommendations, budget and schedule changes, and progress; and makes decisions regarding the Projects through reaching mutual agreement on the proposals brought to it by the Project Coordinators and the CVFFRT. Policy issues unable to be resolved by consensus of the group may be referred to CALFED for resolution. CVFFCT decisions will be reported to other parties through periodic status reports.

During TFTFP and CCFFFP special meetings, the team needs to be augmented by policy-level staff with major decision making authority from various Federal and State agencies that either cost share or have significant regulatory authority over the Projects. These members are included in the table below. Directly affected stakeholder groups are also represented. Agency heads will appoint substitute members of the CVFFCT if a member cannot serve.

## Central Valley Fish Facility Coordination Team (TFTFP and CCFFFP meetings)

| Agency | Agency Representative |
|---|---|
| CALFED | Ron Ott, Co-Lead |
| Department of Fish and Game | Alan Baracco, Co-Lead |
| US Bureau of Reclamation | Ron Brockman |
| Department of Water Resources | Randy Brown |
| US Fish and Wildlife Service | Mike Thabault |
| National Marine Fisheries Service | Gary Stern |
| CVPWUA | Serge Birk |
| MWD | Jim Buell |
| NRCS | Marianne Hallet |

**Central Valley Fish Facilities Review Team (CVFFRT)** - The CVFFRT is a group under IEP of technical experts that is available to agency management to review and provide information and recommendations on fish protection facilities. They also provide a vehicle for communication and inter- and intra-agency coordination on fish screening projects.

The CVFFRT provides technical recommendations to the CVFFCT regarding the projects through reaching mutual agreement on the proposals brought to it by the Project Coordinators, the Technical Advisory Teams and/or other teams assembled for the Projects.

## Central Valley Fish Facilities Review Team

| Agency | Agency Representative |
|---|---|
| Department of Fish and Game | Dan Odenweller<br>George Heise |
| Department of Water Resources | John Andrew<br>Steve Ford |
| US Bureau of Reclamation | Charles Liston<br>Bill O'Leary |
| US Fish and Wildlife Service | Ron Bachman |
| National Marine Fisheries Service | Rick Wantuck |
| CVPWUA | Serge Birk |
| MWD | Jim Buell |

| | |
|---|---|
| NRCS | Marianne Hallet |
| CALFED | Ron Ott |

**Technical Advisory Teams (TATs)** - The TATs consist of technical biological and engineering experts from the agencies participating on the CVFFCT as well as technical representatives from involved stakeholder groups, such as the San Luis Delta Mendota Water Authority. The TATs will meet at least monthly, or more frequently if required to meet project milestones. Project Technical Managers for each facility will provide the overall leadership for the TATs. The TATs will provide detailed expert information, consultation, review and guidance to the design and construction team members. They also provide options and recommendations to the CVFFCT and the CVFFRT regarding overall management of the Projects. Any member of the teams listed in this agreement may attend TAT meetings.

At least one week prior to each meeting, TAT members will receive the agenda and information to be reviewed and discussed at the meeting, including meeting notes documenting issues and decisions made at the prior, meeting. A facilitator will: 1) ensure that TAT members focus on the agenda; 2) ensure that each agencies concerns are being addressed; and 3) assist in consensus building. Issues identified that cannot be resolved by the TATs will be summarized, including describing the range of positions and alternative solutions, and presented to CVFFCT.

**Tracy Technical Advisory Team (TTAT)** - The specific objectives of the TTAT are to:

- Provide technical expertise and assistance in completing conceptual designs and overall development of the TFTFP, for transfer to the final engineering design;
- Provide reviews and technical input throughout the final design process;
- Serve as consultants to the Construction Engineer and his staff in the TFTFP Construction process;
- Develop a report on research and monitoring plans and study designs for TFTFP; and
- Participate and provide technical review throughout all TFTF research and monitoring activities.

**Tracy Technical Advisory Team**

| Agency | Agency Representative(s) |
|---|---|
| US Bureau of Reclamation | Charles Liston<br>Herb Ng<br>Bill O'Leary<br>Lauren Carly |
| Department of Water Resources | John Andrew<br>Randy Beckwith |



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|---|---|
| Department of Fish and Game | George Heise<br>Dan Odenweller |
| US Fish and Wildlife Service | Justin Lee |
| National Marine Fisheries Service | John Johnson<br>Rick Wantuck |
| SLDMWA | David Langlois<br>Bob Martin |
| CALFED | Ron Ott |
| Technical Advisory Specialists to All Team Members | Rick Christensen<br>Art Glickman<br>Mike Lee<br>Brent Mefford<br>Rich Raines<br>David Robinson |

**Clifton Court Forebay Technical Advisory Team (CCFTAT)** - The specific objectives of the CCFTAT are to:

- Provide technical expertise and assistance in completing conceptual designs and overall development of the CCFFFP, for transfer to the final engineering design; and
- Provide reviews and technical input throughout the final design process.

**Clifton Court Forebay Technical Advisory Team**

| Agency | Agency Representative(s) |
|---|---|
| Department of Water Resources | John Andrew<br>Jim Spence<br>David Duval |
| US Bureau of Reclamation | Rick Christensen<br>TBA member from Denver |
| Department of Fish and Game | George Heise<br>Dan Odenweller<br>Salvage Sr. Staff Person TBA |

| | |
|---|---|
| US Fish and Wildlife Service | Justin Lee |
| National Marine Fisheries Service | Rick Wantuck |
| CALFED | Ron Ott |
| State Water Contractors | Terry Erlewine |

**Expert Review Panel** -The Expert Review Panel will consist of fish screen experts who are familiar with the challenges of installing a fish screen, holding, and sorting facilities in the Delta. The Panel will review and provide comments on specific design materials and other documents prepared during the course of the Projects. In addition, certain design concepts or new technology being considered for the Projects can be provided to the Panel. Reviews or work products desired of the Panel will be requested by the Leads of CVFFCT, CVFFRT and or TATs. Tentative Panel members could include:

**Expert Review Panel**

| Representative | Agency or Firm |
|---|---|
| Dennis Dorratcague | Montgomery-Watson |
| Chuck Hanson | Hanson Environmental |
| Ken Bates | Consultant |
| Ned Taft | Alden Labs |
| Darryl Hayes | DWR |
| Perry Johnson | Consultant |
| Joe Cech | UC Davis |
| Lev Kavvas | UC Davis |

**Design Teams** - The principal responsibility of the Design Teams is to design the Projects and produce construction contract plans and specifications. The Design Teams will also provide for design consultation during construction. Design team leaders provide overall leadership for the teams and primary interface with the Project Leaders, the TATs and the Construction Teams. The Design Team Leaders will provide for the day-to-day management of the design efforts.

**TFTFP Value Study Team** - Per Reclamation policies, Value Engineering Studies (VES) are required for any construction project valued at over $500,000. The VES performed by a Value Study Team (VST) is a multi-disciplinary team assembled to assure that the goals of the project can be satisfied at the most economical cost. Reclamation will lead the VST, however other

agencies have been requested to participate. Typical VES are completed within one week or less. Recommendations will be forwarded to the Design Teams and TATs for consideration.

**TFTFP Construction Team** - Reclamation's Construction Engineer will start assembling the Construction Team at the beginning of final design so that key members will be involved in review of the plans and specs and the procurement process. Reclamation's Construction Engineer will lead the team. Additional team members will be added as appropriate as the TFTF moves towards a contract award. The team will consist of the standard Reclamation construction staff, including a resident engineer, office engineer, inspectors, a contract administrator, quality assurance lab and survey personnel and an administrative contracting officer.

**Evaluation and Testing Team** - The Evaluation and Testing Team for each facility are responsible for testing and evaluating all aspects relative to the engineering and biological performance of the new facilities. The teams will be led by Reclamation and DWR in accordance with recommendations from the TATs for the Projects and reports prepared with the assistance of the TATs concerning the research activities and monitoring needed for the Projects.

The undersigned is committed to support the management organization for the Projects as described above.

**CALFED Bay-Delta Program**

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Lester A. Snow, Executive Director

**US Bureau of Reclamation**

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Kirk Rogers, Acting Regional Director
Mid-Pacific Region

**California Department of Water Resources**

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Thomas Hannigan, Director



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**US Fish and Wildlife Service**

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Mike Spear, Manager
California/Nevada Operations Office

**National Marine Fisheries Service**

_____
Rodney McInnis, Acting Regional
Administrator Southwest Region

**California Department of Fish and Game**

_____
L. Ryan Broddrick, Chief Deputy Director