

## **Delta Conveyance**

Fixing water conveyance problems in the Delta has been at the heart of the Delta debate for decades. The objective of Delta conveyance improvements is to address long-standing concerns to improve water supply reliability by reducing conflicts with fish and other Delta diversions, provide protection and improvement of Delta water quality, improve ecosystem health, and reduce risk of supply disruption due to catastrophic breaching of Delta levees. A successful conveyance solution is directly linked to the success of an Environmental Water Account, water transfers, and improvements in both water quality and water supply reliability. CALFED's identified preferred program alternative is a through-Delta approach to conveyance developed through knowledge and experience gained over the past 30 years. The actions shown in Figure 1, form the initial solution package which incorporates the through Delta approach.

### **Interrelationships**

The proposed actions set forth in Figure 1, provide the framework to address multiple issues and implement other elements of CALFED's program for the Delta (e.g. the Ecosystem Restoration Program, Delta island storage, and the Environmental Water Account).

- Conveyance improvements in the north Delta provide a direct opportunity to enhance the wildlife and fishery habitat along local channels.
- Channel improvements and Delta island storage improve water supply reliability and address water quality concerns in the Delta.
- Delta levee improvements enhance the protection of water quality and provide opportunities for wildlife and fishery habitat development.
- Conveyance improvements at the Clifton Court Forebay intake and the Tracy Fish Facility improve fish survival by reducing fish entrainment and predation.
- Conveyance improvements along the lower San Joaquin River system provide opportunities to develop wildlife and fisheries habitat.

These improvements, in conjunction with actions to increase the use of the Joint Point of Diversion and modify current regulatory constraints on State Water Project export operations, provide opportunities to improve fish survival and to contribute to a successful Environmental Water Account and Water Transfers Program by increasing the flexibility and reliability of water operations. In addition, conveyance improvements in the north Delta and along the lower San Joaquin River system provide opportunities to contribute to a successful Ecosystem Restoration Program. The implementation of conveyance improvements in the south Delta is linked with implementation of the Ecosystem Restoration Program to assure habitat improvements occur simultaneously.

CALFED is continuing to evaluate the concept of developing in-Delta storage with a connection to the Clifton Court Forebay. Preliminary review suggests that this in-Delta storage could be operated in a way that enhances export water quality as well as providing benefits for some fish species. A more comprehensive discussion of the Central Delta storage proposal will be presented in the issue paper on storage options.

Delta Conveyance Actions

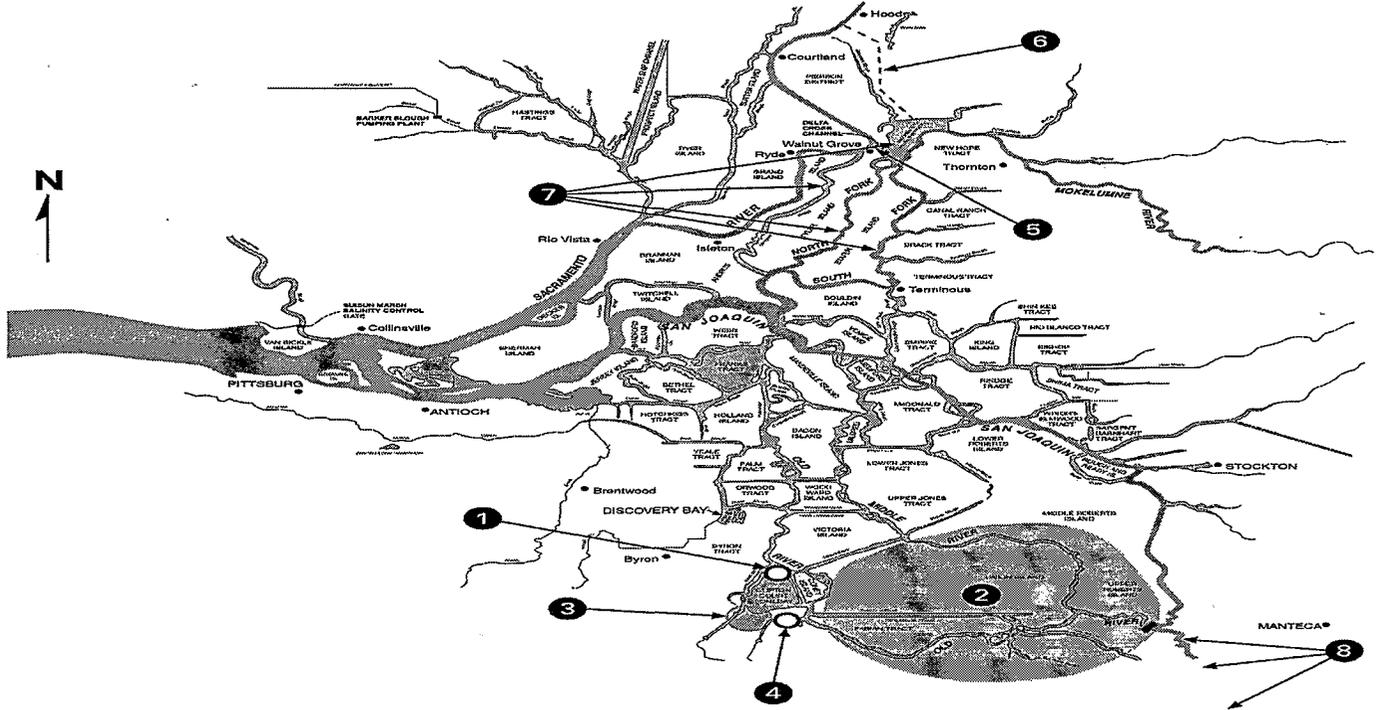


FIGURE 1

1. **CCFB Intake Improvements** - Construct a new screened intake and fish-recovery facilities at Clifton Court Forebay. Modify U.S. Army Corps of Engineers restrictions on SWP operations and implement JPOD to increase the opportunity of using the full export capacity of the SWP Delta facilities. Cost Estimates: \$ 595 Million
2. **South Delta Channel Improvements** - Construct an operable barrier at the head of Old River to improve conditions for San Joaquin fall-run chinook salmon. Consistent with fishery protection, provide water of adequate quantity and quality to agricultural diverters in the south Delta through actions which may include: channel dredging, extension and screening of agricultural intakes, consolidating and screening agricultural intakes, and construction of up to three operable flow control barriers. Cost Estimates: \$ 80 Million
3. **Evaluate SWP/CVP Intertie** - Investigate feasibility of an intertie between SWP and CVP export facilities. Cost Estimates: \$ 6.8 Million
4. **Tracy Fish Facility and Intake Improvements** - Construct either a new screened intake at the USBR's Tracy Fish Facility and/or expand the new intake at Clifton Court Forebay to meet the Tracy Pumping Plant export capacity. Cost Estimates: \$ 100 Million
5. **Improve Delta Cross Channel Gate Operations** - Evaluate, develop, and implement improved Delta Cross Channel Gate operational criteria to improve water quality while protecting fisheries. Cost Estimates: \$
6. **Evaluate Potential Conveyance Facility at Hood** - Evaluate a screened diversion structure on the Sacramento River at Hood (up to 4,000 cfs) to improve water quality in the event the Water Quality Program measures do not result in continuous improvement toward the CALFED drinking water goals. Cost Estimates: \$
7. **Habitat and Conveyance Improvements** - Restore tidal marsh and riparian habitat along Georgiana Slough and on McCormack-Williamson Tract. Construct new setback levees; dredge and/or improve existing levees in the lower Mokelumne River system to improve flood control and provide opportunities to develop wildlife and fisheries habitat along local channels. Cost Estimates: \$ 175 Million (Stage 1 Only)
8. **Lower San Joaquin Flood Conveyance Improvements** - Evaluate flood conveyance improvements in the lower San Joaquin River system in conjunction with wildlife and habitat opportunities. Increased flood protection may be achieved through levee setbacks and improvements while contributing to restoring ecological health of aquatic resources in the lower San Joaquin River and south Delta. Cost Estimates: \$ 50 Million (Stage 1 Only)

**Staging of Actions and Increased Export Capability**

Staging of certain actions allows adaptive management to improve the overall performance of the CALFED program. Evaluations of the Delta Cross Channel Gate operations, the potential conveyance facility at Hood, the single or dual points of diversion, and San Joaquin River re-circulation are done in parallel with the Lower Mokelumne channel improvements and improvements for south Delta agricultural diverters. Evaluation of channel improvements, diversion relocations and barrier locations/operations in the south Delta will determine what can be achieved as an appropriate balance of fisheries, water quality, and water supply benefits.

Screening of the new Clifton Court Forebay intake is staged in 2,500 cfs increments to utilize information gathered from the Tracy Fish Test Facility. Parallel activities include the evaluation of the permanent implementation of the Joint Point of Diversion, and modification of Clifton Court Forebay operational constraints. Upon completion of the Record of Decision for the South Delta Improvements Program, the SWP allowable export rate is planned to increase to 8,500 cfs in a consistent manner with fishery protection. The schedule for increasing the SWP allowable export to 10,300 cfs will be defined in the ROD for the South Delta Improvements Program. Future evaluation of the intertie between the SWP and Central Valley Project facilities will provide additional information for the subsequent implementation of improvements/relocation of Tracy Pumping Plant intake.

**Issues**

- The flow control barriers have been critical for the South Delta Water Agency to believe that they will continue to have access to water (both in quantity and quality) as they have in the past. They do not believe that their water supply will be maintained in any other way. The fishery agencies have concerns about the effect of the flow control barriers on endangered fish. The Grant Line Canal barrier, in particular, has been a point of contention.
- There has been some pressure to remove the proposal for a potential conveyance facility at the Hood diversion site, on the other hand, there has also been similar pressure to make the language more definitive about its construction.

**Recommendations**

Implement the Delta conveyance actions, as set forth in Figure 1, in accordance with the schedule below:

