

Work Plan for Fiscal Year 2007

I Program Title: Red Bluff Diversion Dam Fish Passage Program CVPIA Section 3406(b)(10) (Fish Passage Planning Program)

II Responsible Entities

	Agency	Staff Name	Role
Lead	USBR	Paul Freeman/Buford Holt	Program Managers
Co-Lead	USFWS	Jim Smith	Biologist

III Program Objectives for FY 2007

The program objectives are listed below. The source documents for these objectives, and their relationship, if any, to the CALFED Program Ecosystem Restoration Program Implementation Plan, are noted. In Section VI below, the program objectives have been cross-referenced against the actions the program will undertake during FY07.

- A. Improve safe passage of juveniles migrating downstream, particularly Chinook salmon - (fall, late fall, winter and spring runs). (Source document, CVPIA)
- B. Improve upstream passage of adults. (Particularly Chinook Salmon – fall, late fall, winter and spring runs, and Steelhead). (Source document, CVPIA)
- C. Provide water to users (farmers and wildlife refuges) served by the Tehama-Colusa and Corning Canals. (Source document, CALFED)
- D. Continue to allow Lake Red Bluff to exist if possible, by leaving the gates in during the summer months, while meeting Objectives A, B, C and E.
- E. Select and implement further actions to minimize fish passage problems at Red Bluff Diversion Dam (RBDD). (Source document, CVPIA)
- F. Implement any actions required by the Section 7 consultation regarding the OCAP.
- G. Complete EIS/EIR.

IV Status of the Program

The exploration of alternatives for further improvements of fish passage, compatible with irrigation needs and local interests, has led to general recognition of the efficacy of the operations already implemented in response to the 1993 Biological Opinion for the operation of the CVP and State Water Project on winter-run Chinook salmon given the existing infrastructure. The increased duration of gate removal at RBDD, prompted by the Biological Opinion, dramatically improved baseline conditions for anadromous salmon, and changed the standard against which additional measures to minimize fish passage problems would be measured. This raised standard and the high cost of improvements or refinements at RBDD, which in the end could run counter to late CALFED decisions, led to acceptance of the resulting improvement in fish passage for the short term, and the suspension of new initiatives under the first four years of the six-year Fish Passage Planning Program that Reclamation implemented under Section 3406(b)(10) of the Act. It was agreed, by all agencies involved, that all steps had been taken that could be taken without risk of large, stranded investments pending new developments, such as decisions concerning a Sites reservoir, which were seen as being several years in the future.

The first such development came in FY00, when the Tehama-Colusa Canal Authority (TCCA) concluded the availability of CALFED funds opened new possibilities for resolution of water delivery and fish passage problems, leading to a renewal of investigations of pumping plants and river by-pass options. A Biological Assessment and a draft EIS/EIR for the Fish Passage Improvement Project at RBDD were completed in FY02, and made available for public review. A public hearing and public meeting on the EIS/EIR were also held in Red Bluff in FY02. The USFWS submitted a draft Fish and Wildlife Coordination Act report in August 2002, which was included as an appendix in the draft EIR/EIS document. Given guidance by the court on the timing of Endangered Species Act (ESA) and NEPA compliance activities, work on the EIS/EIR was suspended pending completion of the ESA consultation for the CVP as a whole, and the OCAP consultation. Subsequent delays resulted from the proposal to list, and the eventual listing of, the green sturgeon. A final EIS/EIR is now anticipated in the fall of 2007 following completion of consultation for a new pumping plant capable of year-round operation and the completion of a revised OCAP consultation.

The interests of the major players in the study of fish passage and water diversion options at Red Bluff remain unchanged. The fishery agencies would prefer to see full reliance on screened pumps, the local community is primarily interested in retention of Lake Red Bluff, and the TCCA is concerned about the continuing pressure to shorten the four month period, when diversions at Red Bluff can be made by gravity flow from Lake Red Bluff, and the unreliability of the Black Butte Reservoir supply, which is critical to meeting demands during gates-out periods.

V FY 2006 Accomplishments

The accomplishments for Objectives C, D and E are continuing administrative accomplishments, and are discussed in Status of the Project above. Discussions on the various alternatives to consider for the solution of the fish passage and water delivery problems at RBDD continue with the various agency representatives on the Study Management Group (SMG). The SMG is comprised of representatives of USBR, USFWS, National Marine Fisheries Service (NMFS), California Dept. of Fish and Game (CDFG), California Dept. of Water Resources (DWR) and CH2MHill.

The six alternatives, as outlined in the Red Bluff Fish Passage Program Improvement Project EIS/EIS, are as follow:

- No Action alternative: Maintain existing conditions, except add a fourth pump with fish screens to the RBRPP.
- Alternative 1a: Gates in four months, add a fourth pump to the RBRPP, improve the existing fish ladders, and build a 1,380 ft³/s pumping plant.
- Alternative 1b. Gates in four months, add a fourth pump to the RBRPP, improve the right bank fish ladders, add a 1,000 ft³/s bypass channel on the left bank, and build a 1,380 ft³/s pumping plant.

- Alternative 2a. Gates in two months, add a fourth pump to the RBRPP, improve the existing fish ladder, and build a 1,680 ft³/s pumping plant.
- Alternative 2b. Gates in two months, add a fourth pump to the RBRPP, and build a 1,680 ft³/s pumping plant (no improvement to existing ladders).
- Alternative 3. Remove the gates year-round and build a 2,180 ft³/s pumping plant.

During FY06 the installation of a fourth "fish-friendly" pump in the RBRPP, which has fish screens downstream of the pump, was completed and put into service.

FWS Activities

Improve Fish Counting Technology at RBDD Fish Ladders – During FY 2006, the BOR purchased a Digital Video Recording (DVR) device and associated equipment. The FWS is nearing completion of its first season of field testing. FWS will subsequently prepare a draft annual report for review by BOR.

The preliminary results of the DVR usage have been very favorable. The system is proving to be reliable, efficient, and user-friendly. The system has been tested continuously (24 hrs/day) using motion-detection technology, and appears suitable for both night and day use.

The FWS and BOR will need to begin discussions on long-term use of the DVR technology for fish counting purposes.

Understanding Spring-run Chinook Salmon Passage at Red Bluff Diversion Dam - The fisheries agencies currently uses phenotypic characteristics for identification of spring-run Chinook at the RBDD. Phenotypic methods do not have a high degree of accuracy or precision for repeatability or reliability. FWS has begun initial effort to seek alternative methods that would receive support from local fisheries agencies. Tentatively, FWS is pursuing genetic testing as a method that would help discern spring-Chinook salmon from other runs of Chinook.

Fish Passage Improvement Project at Red Bluff Diversion Dam - The FWS participated in at least one meeting of the Technical Work Group during FY 2006. No other significant developments with this project necessitated FWS involvement.

VI. Tasks, Costs, Schedules and Deliverables

A. Narrative Explanation of Tasks.

1. Program Management – There are four Program Management funding requirements. USBR, as the lead Federal agency; the USFWS, as a co-lead Federal agency; the Tehama-Colusa Canal authority (TCCA), as lead state agency, and CH2M Hill, the consultant.
- 1.1 Program Management – The USBR program manager is responsible for oversight of the program including budgeting and disbursement of federal funds and administering a grant to the TCCA, which provides funding to the TCCA to procure the sub-contractor (CH2M Hill).
- 1.1a. Program Management – the USFWS, as a member of the SMG, will assist USBR and TCCA in developing the alternatives for fish passage improvement at RBDD.
- 1.2 Program Management – The TCCA program is responsible for administering the contract provided for under the grant and Prop 204 funding.
- 1.3 Program Management – CH2M Hill is responsible for providing the resources to accomplish the Tasks listed below, (2 through 5, 7, and 8).
2. Alternative Refinement – Develop fish impact assessment criteria. Assess potential of each alternative to meet the applicable fish passage criteria established by the agencies. Develop screening evaluation factors. These factors will include fish passage improvements, water supply reliability improvement, socioeconomic issues, environmental and permitting issues.
3. Environmental Documentation – Prepare environmental documentation to meet the requirements of CEQA/NEPA and address the impacts and benefits of each alternative developed carried forward.
4. Initiate Permitting – Initiate permit applications not expected.
5. Update Implementation Plan – Resolve implementation constraints and issues.

Additional Funding Needs

6. Program Management – Provide management and administrative support to complete EIS/EIR.
7. Design Specification – Additional funds may be needed in FY06 to begin final design and construction specification drawings depending on Record of Decision (ROD).
8. Acquire Land – Actions not known until ROD issued.

B. Schedule and Deliverables

No.	Task	Dates Start	Dates Complete	Deliverable
1	Program Management	10/01/06	09/30/07	Monitor program for accomplishment, schedule and budget; provide deliverables as stated in Tasks 1.1, 1.2, 1.3 below
1.1	Program Management (BOR)	10/01/06	09/30/07	Provide a revised FY04 Work Plan and a new FY05 Work Plan; provide grant to TCCA for Phase III.
1.1a	Program Management (USFWS)	10/01/06 same	09/07 same	Assist in completion of EIS/EIR. Continue conducting biological studies to monitor passage of adult and juvenile salmonids at RBDD in response to pump installation and gate manipulations
1.2	Program Management (TCCA)	10/01/06	9/30/07	Provide schedule for Phase III to be completed
1.3	Program Management (CH2M)	10/01/06	9/30/07	Provide reports and documents as noted below for Tasks 2 through 9.
2	Alternative Refinement	10/01/06	9/30/07	Select a preferred alternative
3	Environmental Documentation	10/01/06	7/01/07	Provide a final NEPA/CEQA document and the Record of Decision
4	Initiate Permitting	10/01/06	12/31/07	Obtain permits, required by other Agencies, for construction
5	Update Implementation Plan	10/01/06	4/30/07	Final Implementation Plan Report after final OCAP Decision
6	Program Management (CH2M Hill only)	10/1/06	9/30/07	Monitor program for accomplishment, schedule and budget; same as Task 1, 1.1, 1.2, 1.3 above and assist in Tasks 7 and 8 below.
7	Final Design <i>Delayed until final ROD Determination</i>	To be Determined	To be Determined	Begin final design for pumping plant and provide construction specification depending on ROD.
8	Land Purchase <i>Delayed until final ROD Determination</i>	To be Determined	To be Determined	Begin acquisition process for land for the construction and operation of the pumping plant depending on ROD.

C. Summary of Program Costs and Funding Sources

No.	Task	Total Cost	W&RR
1	Program Management	(n/a)	(n/a)
1.1	Program Management (BOR)	\$120,000	\$120,000
1.1a	Program Management (FWS)	\$250,000	\$250,000
1.2	Program Management (TCCA)	\$70,000	\$0
1.3	Program Management	\$12,000	\$12,000
2	Alternative Refinement	\$58,000	\$58,000
3	Environmental Documentation	\$80,000	\$80,000
4	Initiate Permitting	\$50,000	\$50,000
5	Program Management	\$10,000	\$10,000
6	Program Management	\$20,000	\$20,000
7	Final Design	\$150,000	\$150,000
8	Land Purchase	\$500,000	\$500,000
Total Program Budget		\$1,320,000	\$1,250,000

EXPLANATORY NOTES: The CALFED (Prop 204 funds) will not provide any funding for the FY07 program. 6 includes funding for USBR Denver technical Service Center and MP Design and Construction Offices to assist in construction reviews. 1.2 TCCA will provide in-kind services for their program management activities, which is valued at \$70,000.

D. CVPIA Program Budget

No CVPIA funds are anticipated for FY07 although substantial sums may be requested in FY07 for land acquisition and completion of final designs.

VII Future Years Commitments/Actions

We are engaged in the NEPA/CEQA process for this program. The completion schedule for Tasks 1 through 5 under Phase II of the Project coincides with, with a Record of Decision (ROD), expected in the first quarter of FY08. Phase III of the Project begins at the start of FY08 and includes Final Designs and Land Acquisition. Phase IV follows with Project Construction and the Program concludes with Phase V, which is Monitoring of the Project.

Currently we are looking at six alternatives in the EIS although ESA consultation is focusing on the maximum impact scenario of a full scale pumping plant. Note that all alternatives include use of the Research Pumping Plant with four pumps. The cost estimates are in 2002 dollars (page 3-307 of the DEIS/EIR).

- A. **No Action Alternative:** Existing conditions, except for the addition of the Bay 4 pump. Cost estimates: \$3,700,000.
- B. **Alternative (1a):** Leave the gates in at RBDD, i.e., utilize gravity flows to the T-C and Corning Canals, from May 15 to Sept 15 each year. Build a 1,380 ft³/s pumping plant with fish screens while continuing to use the existing pumping plant, install a fourth pump at the existing plant, and improve both existing right and left bank ladders. Cost estimate: \$80,300,000. All cost estimates are feasibility level.

- C. **Alternative (1b)**: Leave the gates in at RBDD, i.e., utilize gravity flows to the T-C and Corning Canals, from May 15 to Sept 15 each year. Build a 1,380 ft³/s pumping plant with fish screens while continuing to use the existing pumping plant, install a fourth pump at the existing plant, and, improve the existing right and install a fish by- channel on the left bank. Cost estimate: \$87,300,000. All cost estimates are feasibility level.
- D. **Alternative (2a)**: Gates in at RBDD from July 1 to August 31 each summer. Build a 1,680 ft³/s pumping plant with fish screens while continuing to use the existing pumping plant, install a fourth pump at the existing plant, and improve both existing left and right bank fish ladders. Cost estimate: \$90,300,000.
- E. **Alternative (2b)**: Same as Alternative (2a) except, no improvement to abutment fish ladders. Cost estimate: \$72,600,000.
- F. **Alternative (3)**: Gates at RBDD remain open year around, no gravity flow to canals. Build 2180 ft³/s pumping capacity with fish screens while continuing to use the existing pumping plant, and install a fourth pump at the existing plant. Cost estimate: \$80,300,000.