Draft CVPIA Fiscal Year 2011 Annual Work Plan

January 31, 2011

Program Title

Head of Old River Barrier, South Delta Improvements Program CVPIA Section 3406(b)(15).

Responsible Entities

Staff Name	Agency	Role
Jacob McQuirk	DWR	Lead
Sharon McHale	USBR	Co-Lead

Program Goals and Objectives for FY 2011

- Construct a permanent operable barrier at the head of Old River to reduce the movement of San Joaquin River watershed Central Valley fall-/late fall-run Chinook salmon into the south Delta via Old River.
- Source documents that support the Program include the CVPIA Programmatic Record of Decision (ROD), Biological Opinion, the CALFED Programmatic ROD, the CALFED Conveyance Program, the South Delta Improvements Program Final EIS/EIR.

Status of the Program

- The South Delta Improvements Program which includes implementation of a permanent operable barrier at the head of Old River Barrier resulted in the completion of part of the environmental compliance with public release of the Final EIS/EIR. However, the Program is unable to secure biological opinions from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service due to the outcome of the Section 7 consultation and biological opinion for the operations of the CVP and SWP..
- Data collected and conclusions which were funded include completion of the Final Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) and the Action Specific Implementation Plan.
- Installation of a non-physical barrier at the head of Old River was implemented in 2009 and 2010 to deter salmonids from entering Old River and the south Delta. Monitoring and Reporting indicate that deterrence was accomplished.

FY 2010 Accomplishments

- DWR and Reclamation conducted a study to assess the effects of south Delta temporary barriers on juvenile salmon by installing a non-physical barrier at the head of Old River. Reclamation tested the ability of the non-physical behavioral barrier (sound/bubbles/lights) in the San Joaquin River to reduce the number of juvenile salmon that enter Old River. As part of the Reclamation effort, an eight hydrophone system was placed at the divergence of upper Old River and the San Joaquin River for 2-D tracking of acoustically tagged fish passing by the divergence. Results of these studies are pending final analysis of the data. However, a draft technical memorandum (Bowen and Bark, 2010) on the effectiveness of the non-physical barrier indicated that the protection efficiency with the barrier off was 25.9% but with the barrier on it was 43.1%. This was statistically significant. More importantly, a 17.2% improvement in survival in this area may be biologically important. It is hypothesized that higher discharges in 2010, produced lower transit times than 2009, to and through the area of the Divergene of the San Joaquin and Old Rivers. These higher discharges and lower transit times, worked synergistically with the non-physical barrier to produce significantly higher survival.

Literature Cited

Bowen, M.D. and R. Bark. 2010. 2010 Effectiveness of a Non-Physical Fish Barrier at the Divergence of the Old and San Joaquin Rivers (CA). US Bureau of Reclamation. Technical Service Center Technical Memorandum 86-68290-10-07. Denver, CO, US

Table 1. FY 2011 Activities and Costs

AWP Activity Number	Type of Activity	# of FTE's	Activity Name & Description	NMFS OCAP RPA#	Performance Metric	Performance Target	Complete this FY? Y/N	Total Project Cost	FY2011 Anticipated Funding			
									Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
1.1	**Program Management**											
1.1.1		0.1	USBR Management		Contributing to the completion of one of 73 structural actions of the CVPIA Program.			$25,000	$0	$0	$25,000	$25,000
						Subtotal Funding		**$25,000**	**$0**	**$0**	**$25,000**	**$25,000**
						Reclamation		$0	$0	$0	$0	$0
						Service		$0	$0	$0	$0	$0
						Other*CALFED		$25,000	$0	$0	$25,000*	$25,000
1.12	**Monitoring**											
1.12.1			Denver TSC, will monitor and report on the fish behavior effects related to the installation of a non-physical barrier at the head of Old River.					$250,000	$0	$0	$250,000	$250,000
						Subtotal Funding		**$250,000**	**$0**	**$0**	**$250,000**	**$250,000**
						Reclamation		$0	$0	$0	$0	$0
						Service		$0	$0	$0	$0	$0
						Other*CALFED		$250,000*	$0	$0	$250,000	$250,000
	TOTAL FUNDING							**$275,000**	**$0**	**$0**	**$275,000**	**$275,000**
	Total Funding Breakdown by Agency:											
	Reclamation							$0	$0	$0	$0	$0
	Service							$0	$0	$0	$0	$0
	Other		CALFED					$275,000	0	$0	$275,000	$275,000

Table 2. FY 2011 Budget Breakout

Task	Agency	FTE	LABOR		CONTRACTS		USBR Only Misc. Costs	Total Costs
			Direct Salary and Benefits Costs 1/	FWS Only Overhead Assess: 22% of Direct Salary and Benefits Costs 2/	Contract, Grant, and Agreement Costs	FWS Only Overhead Assess: 6% Contract Costs 2/		
1.1 Program Management	FWS		$0	$0	$0	$0		$0
	USBR		$25,000		$0		$0	$25,000
1.12 Monitoring	FWS		$0	$0	$0	$0		$0
	USBR		$0		$250,000		$0	$250,000
1.13 Modeling	FWS							
	USBR							
1.14 Other	FWS							
	Other							
	Other							
	USBR							
	Other							
	Other							
Administrative Total - FWS				$0		$0		$0
Contracts, Grants and Agreements Total - FWS					$0			$0
FWS Total Costs		0	$0	$0	$0	$0		$0
Administrative Total - USBR			$0				$0	$0
Contracts, Grants and Agreements Total - USBR					$0			$0
USBR Total Costs		0	$0		$0		$0	$0
TOTAL ALL OTHER FUNDING SOURCES*			$25,000		$250,000		$0	$275,000
TOTAL ALL		**0**	**$25,000**	**$0**	**$250,000**	**$0**	**$0**	**$275,000**

1/ For FWS only: The FWS develops a bio-rate which is the combination of both the salary/benefit and related administrative costs. The FWS simple definition reads, "It is an average $$ rate that is developed and used for estimating project costs. It incorporates a biologists' salary and benefits, supervisory, clerical and biologist support costs and all other office operating costs related to completing project tasks.

2/ FWS assesses an O/H Burden charge of 6% on all contracts/agreements related to budget object codes starting with 25, 41, and 32, and a charge of 22% on costs under all other budget object codes.

* Other Funding Source: CALFED

Table 3. FY 2012 – 2014 Three-Year Budget Plan

Year	Description of Activities	Requested RF Funding	Requested W&RR Funding
2012	Monitoring and reporting on the deterrence effects of installation of a non-physical barrier at the Head of Old River to keep salmon out of the south Delta.	$300,000	
2013	Monitoring and reporting on the deterrence effects of installation of a non-physical barrier at the Head of Old River to keep salmon out of the south Delta.	$325,000	
2014	Monitoring and reporting on the deterrence effects of installation of a non-physical barrier at the Head of Old River to keep salmon out of the south Delta.	$350,000.	

Table 4. FY 2011 CVPIA Monitoring Projects

Project Description:	Non-Physical Barrier at the Head of Old River
FY 2010 Project Complete?	Yes
CVPIA annual work plan subtask number:	
Scope of the monitoring effort:	Determine non-physical barrier (NPB) efficacy at the Head of Old River through acoustic telemetry
Product/deliverable:	Technical Memorandum (Bowen and Bark, 2010)
Cost:	$256,000
Questions posed:	What is the deterrence efficiency of the non-physical barrier? What proportion of Chinook smolts survive to pass down into the San Joaquin River (SJR) passed the Divergence of the SJR and Old River?
Objectives:	Determine deterrence efficiency with the NPB off and on. Determine protection efficiency with the NPB off and on. Determine overall efficiency with the NPB off and on. Compare statistically each of these three paired sets of observations.
Results – expected or actual:	In 2009, protection efficiency was 30%. In 2010, protection efficiency was 43%. We expect results to be in this range for 2011.
Data collection methods:	Acoustic telemetry.
Data management:	Data are managed by the principal investigator, Mark Bowen
Assessment:	Assessment is made by the evaluation team headed by Mark Bowen and results are published in a technical memorandum and comments are invited from regulatory agency personnel
Use of information in future decision making:	Evaluation of the NPB will inform decisions regarding the San Joaquin River flows which requires a barrier of some sort at the head of Old River; determine which type of barrier to use at the head of Old River and other locations in the Delta
NMFS OCAP BO RPA	IV.1.3. Engineering Solution: “Prevent emigrating salmonids from entering channels in the south Delta (e.g. Old River, etc.” And, “non-physical barrier technology can be further vetted through this action.”