

DRAFT CVPIA Fiscal Year 2010 Annual Work Plan

October 1, 2009

Program Title

Dedicated Project Yield CVPIA Section 3406 (b)(2)

Responsible Entities

Agency	Staff Name	Role
FWS	Roger Guinee	Lead, Program Manager
Reclamation	Paul Fujitani	Co-Lead, Program Manager

Program Goals and Objectives for FY 2010

The Department of the Interior (Interior) has the responsibility to dedicate and manage annually 800,000 acre-feet of Central Valley Project (CVP) water (i.e., (b)(2) water) for fish, wildlife, and habitat restoration purposes. In dry and critical years, the shortage criteria specified in the Dept. of Interior May 9, 2003 Decision on Implementation of Section 3406 (b)(2) applies when deliveries to CVP agricultural water service contractors north of the Delta are reduced because of hydrologic circumstances. In dry years the amount of b2 water available may be reduced by up to 100,000 acre-feet, and in critical years the amount of b2 water may be reduced by up to 200,000 acre-feet.

The program objectives are enumerated below. The source documents for these objectives include the CVPIA Programmatic Record of Decision (ROD), Final Restoration Plan for the Anadromous Fish Restoration Program (AFRP), CALFED Programmatic ROD, and Interior's May 9, 2003 Decision on Implementation of Section 3406 (b)(2) of the CVPIA.

- a. Improve habitat conditions for anadromous fish in CVP controlled rivers and streams and the Bay-Delta to help meet the AFRP doubling goals
- b. Increase survival of out migrant juvenile anadromous fish, especially in the Bay-Delta.
- c. Contribute to recovery of listed threatened and endangered fish species, including delta smelt.
- d. Assist the State in its efforts to protect the Delta.
- e. Monitor and evaluate to assess the effectiveness of (b)(2) measures.

Status of the Program

On May 9, 2003, Interior released a revised Final Decision on Implementation of Section 3406 (b)(2), in response to a ruling by the federal District Court in March, 2002. The revised Final Decision set out a calculation of CVP yield, the method of accounting for use of the dedicated CVP yield, and procedures for management of the yield.

On June 3, 2003 and again on January 23, 2004, the U.S. Court of Appeals for the Ninth Circuit

upheld the District Court’s ruling on offset/reset, but stated the District Court erred in concluding that Interior lacks discretion to specify what portion of the 800,000 acre feet be set aside for water quality and Endangered Species Act purposes. Section 3406 (b)(2) provides that the “primary purpose” to which the 800,000 acre feet should be dedicated is the implementation of “fish, wildlife, and habitat restoration purposes authorized by this title...” (i.e., CVPIA). The language of the statute gives Interior discretion to allocate the 800,000 acre feet among fish and wildlife, water quality, and endangered species obligations, as long as Interior’s allocation gives effect to the hierarchy of purposes established in Section 3406 (b)(2).

In September 2008, the Federal District Court issued a memorandum opinion in *San Luis & Delta Mendota Water Authority v. Department of Interior*, 1:97-cv-6140, 1:98-cv-5261 OWW DLB (E.D.Cal. Sept. 19, 2008), concerning Interior’s (b)(2) accounting for the 2004 water year¹. Thus, Interior accounted for fishery actions, including Endangered Species Act (ESA) and water quality control plan (WQCP) actions during the 2009 water year consistent with that opinion, as well as, the Ninth Circuit’s decision in *Bay Inst. of San Francisco*, Interior’s 2003 (b)(2) Policy, and 2003 (b)(2) Guidance.

The CALFED Programmatic ROD, signed on August 28, 2000, established an Environmental Water Account (EWA) program whose purpose is to provide protection (supplemental to a baseline level of protection) to the fish of the Bay-Delta estuary. Beginning in water year 2001, the management of the (b)(2) water was closely coordinated with the management of the EWA water. Both (b)(2) and the EWA contribute to the CVPIA’s goal of doubling natural production of anadromous fish and provide concurrent benefits to other fish and wildlife, including endangered species. However, it is our understanding that in WY 2010 the EWA will be limited to the acquisition of approximately 60,000 AF of environmental water from the Yuba River pursuant to the Yuba River Accord. Monitoring and evaluation will continue to assess the effectiveness of the (b)(2) environmental measures.

Biological Benefits

Since 1993, (b)(2) water has been dedicated and managed annually for fish, wildlife, and habitat restoration purposes; to assist the State of California in its efforts to protect the waters of the San Francisco Bay/Sacramento-San Joaquin Delta estuary; and to help meet post 1992 ESA requirements, including delta smelt.

In general, (b)(2) fish actions have included: (1) instream flow augmentations on CVP-

¹ In that opinion, Judge Wanger stated that the “primary purpose” of CVPIA Section 3406(b)(2) “includes all those fish and wildlife restoration activities specifically described in section 3406(b),” including “water dedicated to accomplish the anadromous fish doubling goal set forth in section 3406(b)(1)” and “water needed to accomplish any of the other specifically enumerated programs listed in section 3406(b)(2). SLDMWA, at 43 (underline in original). Thus, “if an action taken under the WQCP and/or ESA predominantly contributes to one of the primary purpose programs (e.g., fish doubling), it must be counted toward the 800,000 AF limit.” Id. at 48. In so doing, Judge Wanger recognized that there may be some “primacy” to section 3406(b)(1) in relation to other stated purposes of section 3406(b), but he did not rule on that question. Id. at 45.

controlled streams to protect salmon and steelhead and contribute toward meeting AFRP flow objectives; (2) increased releases from New Melones Reservoir to help meet Water Quality Control Plan (WQCP) requirements for San Joaquin River flows at Vernalis; (3) increased releases from Shasta and/or Folsom reservoirs to help meet WQCP Delta outflow requirements; and (4) export reductions at the CVP Tracy pumps to protect at-risk fish species (notably salmon, steelhead, and delta smelt).

Many factors have contributed to the decline of anadromous fish in Central Valley rivers and streams. Pursuant to CVPIA and AFRP numerous restoration efforts, including the use of (b)(2) water to help meet AFRP flow objectives have been implemented that are intended to positively affect multiple stressors. Consequently, assessing the biological benefits of (b)(2) fish actions in isolation from other restoration activities is very difficult. However, the Service believes increased instream flows in particular have helped maintain or improve salmon and steelhead habitat and populations in CVP-controlled streams. The Service also believes that export reductions at critical times have helped protect delta smelt as well as salmon and steelhead in the Delta.

The (b)(2) water is just one of the environmental tools created by the CVPIA to achieve the AFRP anadromous fish doubling goal. The Final Restoration Plan for the AFRP establishes Chinook salmon doubling targets for each of the main rivers and streams in the Central Valley. On the CVP-controlled streams, where (b)(2) water is available, Clear Creek appears to be making progress toward meeting the doubling goal for fall run Chinook salmon. The Service is still evaluating whether the doubling of natural production will be sustainable on a long-term basis.

FY 2009 Accomplishments

Interior's May 2003 Decision on Implementation of Section 3406(b)(2) was implemented for the sixth year in 2009. It is important to note that the EWA was limited in 2009 to the acquisition of approximately 60,000 AF of environmental water from the Yuba River pursuant to the Yuba River Accord, and that the Department of Water Resources (DWR) generally uses EWA water to compensate for the State Water Project (SWP) export reductions during the VAMP period. The implementation of (b)(2) water is no longer coordinated with the implementation of CALFED's limited EWA.

Water year 2009 (which started October 1, 2008) was the third consecutive dry year, and began with much lower than average storage conditions in CVP reservoirs. In addition the spring of 2009 turned out to be extremely dry. Both the Sacramento Valley Water Year Type Index and the San Joaquin Valley Water Year Type Index were classified as dry in 2009. As a result, the (b)(2) shortage criteria in the May 2003 (b)(2) Decision was triggered and the total amount of (b)(2) water available for WY 2009 was reduced to 600,000 acre-feet for the second year in a row.

Using the WY 2009 (b)(2) allocation, Interior implemented upstream actions and several Bay-

Delta actions consistent with the May 2003 (b)(2) Decision that contributed to the CVPIA's goal of doubling natural production of anadromous fish and providing concurrent benefits to other fish and wildlife, including endangered species.

In FY 2009 the following (b)(2) actions were taken:

Increased flows in Clear Creek from low base levels throughout the year to improve habitat conditions for anadromous fish, including benefits to Chinook salmon and steelhead upstream migration, spawning, egg incubation, rearing, and downstream migration.

In recognition of the dry conditions and the low Shasta Reservoir storage, Sacramento River flows were not augmented in the fall of 2008 and flows in the January through March 2009 period were at the legal minimum of 3,250 cfs.

Low American River flows were augmented with (b)(2) water from October through early March and maintained in the 925 – 1,200 cfs range. The use of (b)(2) water during this period was intended to improve instream conditions for fall run Chinook and steelhead during their spawning, incubation, and rearing periods.

On the Stanislaus River, (b)(3) acquired water was used to provide an October attraction flow for fall-run Chinook spawners. From late October through late December, (b)(3) water was used to augment low base flows and maintain 200 -250 cfs. A small amount of (b)(2) water was used in early February to maintain flows at 165 cfs to protect fall run Chinook rearing and steelhead spawning habitat.

Due to the third consecutive dry year, the spring pulse flows normally provided by the San Joaquin tributary groups pursuant to the VAMP experiment were not provided in 2009. Instead, a combination of base flow, (b)(3) difference water, and (b)(2) water were used to provide a pulse flow on the Stanislaus River between April 17 and May 17, 2009. This pulse flow of approximately 1,100 cfs was intended to improve conditions for outmigrating fall run Chinook smolts and steelhead, with concurrent habitat improvements for delta smelt.

Exports at the CVP Jones pumping plant were largely controlled by critically dry hydrologic conditions, implementation of the Fish and Wildlife Service OCAP Biological Opinion (December 2008) for the protection of delta smelt, and WQCP requirements for E/I and Delta outflow. In addition, CVP exports were reduced during the 31-day period, from April 17 – May 17 to meet WQCP requirements to protect outmigrating salmon and steelhead smolts.

Interior provides detailed accounting of (b)(2) fish actions on an annual basis, usually in December following the close of the water year. This information is posted on the internet at the US Bureau of Reclamation, Mid-Pacific Region, Central Valley Operations Office homepage at www.usbr.gov/mp/cvo.

The program continued monitoring and evaluation to assess and inform decision-making regarding the effectiveness of (b)(2) environmental measures. Real-time fish monitoring helps inform (b)(2) decisions on when and where actions should be taken. On a weekly basis, fishery biologists from the Sacramento, San Joaquin, and Delta update the Data Assessment Team on fish movements. The sites sampled include the mainstem Sacramento and San Joaquin Rivers, their major tributaries, and various locations in the Delta, including the export facilities.

Table 1. FY 2010 Tasks, Costs, Schedules and Deliverables

Task or Subtask Number	Name of Activity	FTE	Description of Activity	Completion Date	Restoration Fund Anticipated	Water & Related Resources Anticipated	State or Other Sources Anticipated	Total All Sources Anticipated
1.1	Program Management							
			FWS Program Lead, USBR Co-Lead. Dedicate and manage annually 800,000 acre-feet of CVP water for fish, wildlife, and habitat restoration purposes. High priority.					
1.1.1		0.13	FWS	annual ongoing	\$28,384	\$0	\$0	\$28,384
1.1.2		0.15	USBR	annual ongoing	\$32,602	\$0	\$0	\$32,602
	<u>Subtotal Costs</u>	0.28			\$60,986	\$0	\$0	\$60,986
1.2	Program Support							
			FWS staff and USBR staff. Dedicate and manage annually 800,000 acre-feet of CVP water for fish, wildlife, and habitat restoration purposes. High priority.					
1.2.1		0.04	FWS contracting and budget staff support	annual ongoing	\$9,011	\$0	\$0	\$9,011
1.2.2		0.09	FWS	annual ongoing	\$19,374	\$0	\$0	\$19,374
1.2.3			USBR - included in 1.3.3		\$0	\$0	\$0	\$0
	<u>Subtotal Costs</u>	0.13			\$28,385	\$0	\$0	\$28,385
1.3	Technical Support							
			Technical support for the (b)(2) program includes coordination and budget prep, developing monthly CVP operations forecasts, weekly (b)(2) interagency team meetings, daily accounting of (b)(2) usage, participation in the American River FMS process, and participation in the ongoing OCAP process. High priority.					
1.3.1		0.17	FWS hydrologist	annual ongoing	\$35,480	\$0	\$0	\$35,480
1.3.2		0.17	FWS biologist	annual ongoing	\$35,480	\$0	\$0	\$35,480
1.3.3		0.47	USBR	annual ongoing	\$89,648	\$0	\$0	\$89,648
	<u>Subtotal Costs</u>	0.81			\$160,608	\$0	\$0	\$160,608
1.4	Restoration Actions							

Task or Subtask Number	Name of Activity	FTE	Description of Activity	Completion Date	Restoration Fund Anticipated	Water & Related Resources Anticipated	State or Other Sources Anticipated	Total All Sources Anticipated
			b2 water is used to improve habitat conditions for anadromous fish in CVP controlled streams and the Bay-Delta to help meet the AFRP doubling goals; to increase the survival of outmigrant juvenile anadromous fish (especially in the Delta); and to enhance recovery of listed threatened and endangered fish species (FWS Region 8); Tasks 1.3 and 1.4 are directly linked to each other and the total costs have been split between technical support and restoration actions to illustrate that the b2 program efforts improve instream and Delta conditions. High priority.					
1.4.1		0.34	FWS staff (Region 8)	annual ongoing	\$70,960	\$0	\$0	\$70,960
	<u>Subtotal Costs</u>	0.34			\$70,960	\$0	\$0	\$70,960
1.7	Outreach and Public Involvement							
			Interior has established a stakeholder and public involvement process to present and discuss information on the annual (b)(2) fishery action plan and how the plan is integrated into the operations forecast. High priority.					
1.7.1		0.07	FWS	annual ongoing	\$14,192	\$0	\$0	\$14,192
1.7.2			USBR - included in 1.3.3	annual ongoing	\$0	\$0	\$0	\$0
	<u>Subtotal Costs</u>	0.07			\$14,192	\$0	\$0	\$14,192
1.12	Monitoring							
			Monitoring and evaluation efforts assess the effectiveness of b2 environmental actions. The monitoring elements listed are a high priority .					
1.12.1		0.31	Ultrasonic tags and recovery of late fall-run Chinook juveniles for Delta Action 8 to evaluate the effects of exports on smolt survival (tags, tagging, receiver, coordination, data analysis, report prep) - FWS Stockton. This includes a contract of \$61,525.	annual ongoing	\$132,638	\$0	\$0	\$132,638
1.12.2		0.29	Redd dewatering analysis on Sacramento River, American River, and Clear Creek. Use GPS redd locations and IFIM models to identify potential dewatering events and help inform b2 decisions. (FWS Sacramento) & (FWS Red Bluff)	annual ongoing	\$61,271	\$0	\$0	\$61,271
	<u>Subtotal Costs</u>	0.60			\$193,909	\$0	\$0	\$193,909
1.13	Modeling							

Task or Subtask Number	Name of Activity	FTE	Description of Activity	Completion Date	Restoration Fund Anticipated	Water & Related Resources Anticipated	State or Other Sources Anticipated	Total All Sources Anticipated
			Hydrologic computer model evaluations will be conducted on a monthly basis (CVP Forecast model) to assess various (b)(2) implementation scenarios, and CALSIM II and ECOSYM modeling will be done on an as-needed basis. High priority.					
1.13.1		0.27	FWS hydrologist	annual ongoing	\$56,768	\$0	\$0	\$56,768
1.13.2			USBR - included in 1.3.3	annual ongoing	\$0	\$0	\$0	\$0
	<u>Subtotal Costs</u>	0.27			\$56,768	\$0	\$0	\$56,768
1.14	Other - Prepare information for litigation. High priority.							
1.14.1	Litigation prep	0.07	FWS	annual ongoing	\$14,192	\$0	\$0	\$14,192
	<u>Subtotal Costs</u>	0.07			\$14,192	\$0	\$0	\$14,192
	Total Costs	2.57			\$600,000	\$0	\$0	\$600,000
	USBR Costs	0.62			\$122,250	\$0	\$0	\$122,250
	USFWS Costs	1.95			\$477,750	\$0	\$0	\$477,750
	Unfunded Needs		Additional staff funding needed for program management, program support, technical support, restoration actions, outreach, modeling, and litigation preparation.					
1.12.3		0.21	Analysis of historical RBDD data (FWS Red Bluff)		\$44,000		\$0	\$44,000
1.12.4		0.09	Analysis of spawning location relative to temperature management (FWS Sacramento)		\$20,000		\$0	\$20,000
1.12.5		0.09	Analysis of Spawning timing relative to temperature and flow management (FWS Sacramento)		\$20,000		\$0	\$20,000
1.12.6		0.09	Develop b2 Decision Matrix (FWS Sacramento)		\$20,000		\$0	\$20,000
1.12.7		0.13	Acoustic study of Stanislaus River wild steelhead survival (FWS Lodi)		\$28,000		\$0	\$28,000
1.12.8		0.13	Evaluate b2 for long term planning with quantitative and qualitative models (FWS Sacramento)		\$27,250		\$0	\$27,250
	<i>Total FWS</i>	0.74			\$159,250		\$0	\$159,250
1.1.2, 1.2.3, 1.3.3, 1.13.2,	<i>Total USBR</i>	0.22	USBR		\$40,750		\$0	\$40,750
	Total Unfunded Need	0.98			\$200,000	\$0	\$0	\$200,000

Table 2. Budget Breakout

Task	Agency	FTE	LABOR		CONTRACTS		USBR Only Misc. Costs	Total Costs
			Direct Salary, Benefits and Admin. 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	0.13	\$23,266	\$5,118	\$0	\$0		\$28,384
	USBR	0.15	\$32,602		\$0		\$0	\$32,602
1.2 Program Support	FWS	0.13	\$23,266	\$5,118	\$0	\$0		\$28,384
	USBR		\$0		\$0		\$0	\$0
1.3 Technical Support	FWS	0.34	\$58,164	\$12,796	\$0	\$0		\$70,961
	USBR	0.47	\$89,648		\$0		\$0	\$89,648
1.4 Restoration Actions	FWS	0.34	\$58,164	\$12,796	\$0	\$0		\$70,961
	USBR		\$0		\$0		\$0	\$0
1.7 Outreach and Public Involvement	FWS	0.07	\$11,633	\$2,559	\$0	\$0		\$14,192
	USBR		\$0		\$0		\$0	\$0
1.12 Monitoring	FWS	0.60	\$108,511	\$23,872	\$58,042	\$3,483		\$193,908
	USBR		\$0		\$0		\$0	\$0
1.13 Modeling	FWS	0.27	\$46,531	\$10,237	\$0	\$0		\$56,768
	USBR		\$0		\$0		\$0	\$0
1.14 Other	FWS	0.07	\$11,633	\$2,559	\$0	\$0		\$14,192
	USBR		\$0		\$0		\$0	\$0
Administrative Total - FWS			\$341,168	\$75,057		\$3,483		\$419,708
Contracts, Grants and Agreements Total - FWS					\$58,042			\$58,042
FWS Total Costs		1.95	\$341,168	\$75,057	\$58,042	\$3,483		\$477,750
Administrative Total - USBR			\$122,250				\$0	\$122,250
Contracts, Grants and Agreements Total - USBR					\$0			\$0
USBR Total Costs		0.62	\$122,250		\$0		\$0	\$122,250
TOTAL ALL		2.57	\$463,418	\$75,057	\$58,042	\$3,483	\$0	\$600,000

^{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.

Table 3. Draft Three Year Budget Plan FY 2011 – 2013

(\$ amounts in thousands)

Year	Description of Activities	Requested RF Funding	Requested W&RR Funding
2011	Augment the existing b2 program (\$1,100,000), develop New Melones water management guidelines (\$225,000), conduct additional monitoring (\$482,715), additional stakeholder involvement, litigation costs, and model evaluations (\$285,000)	\$2,093	
2012	Augment the existing b2 program (\$1,100,000), develop New Melones water management guidelines (\$225,000), conduct additional monitoring (\$482,715), additional stakeholder involvement, litigation costs, and model evaluations (\$285,000)	\$2,093	
2013	Augment the existing b2 program (\$1,100,000), develop New Melones water management guidelines (\$225,000), conduct additional monitoring (\$482,715), additional stakeholder involvement, litigation costs, and model evaluations (\$285,000)	\$2,093	

Note: The FY 2011 – 2013 Budget Plan provides estimates of capability only. The amounts are displayed are those that might be reasonably appropriated each year. These figures do not reflect the future Congressional Appropriations process. All of these estimates will be adjusted annually as RF collections are realized.

Table 4. FY 2010 CVPIA Monitoring Projects

Project Description:	Delta Action 8: Use ultrasonic tags and recovery of late fall-run Chinook juveniles to evaluate the effects of exports on Sacramento River smolt survival (tags, tagging, receiver, coordination, data analysis, report prep) - Pat Brandes FWS Stockton.
FY 2009 Project Complete?	2009 field work complete, analysis in prep.
CVPIA annual work plan subtask number:	1.12.1
Scope of the monitoring effort:	Sacramento River, Delta Cross Channel Gates, Delta
Product/deliverable:	Digital database, final report
Cost:	\$132,638 in FY2010
Questions posed:	Which routes do LFR smolts take, and what are their survival rates at different flows and export rates.
Objectives:	Evaluate late fall-run Chinook smolt survival as a function of export rates, Sacramento River flows, and route selection.
Results – expected or actual:	Digital files and final report
Data collection methods:	Salmon smolts are implanted with hydroacoustic tags and released at several sites in the Sacramento River. Use stationary receivers to track route selection and survival rates.
Data management:	Digital files and reports archived by Pat Brandes (FWS Stockton)

Assessment:	Continue evaluation of late fall-run Chinook smolt survival as a function of export rates, flows, and route selection.
Use of information in future decision making:	The Delta Action 8 study is providing insights regarding flows, export rates, route selection, and survival rates. Results from prior Delta Action 8 studies have been used to inform management decisions on DCC operations.
NMFS OCAP BO RPA	No, but the NOAA RPA for DCC closures (IV.1) specifically allows this evaluation to continue in future years.

Project Description:	Redd dewatering analysis on Sacramento River, American River, and Clear Creek.
FY 2009 Project Complete?	N/A, new project
CVPIA annual work plan subtask number:	1.12.2
Scope of the monitoring effort:	Sacramento River, American River, Clear Creek
Product/deliverable:	Digital database and final report providing an analysis of the data.
Cost:	\$61,271
Questions posed:	What magnitude of flow fluctuations dewater salmon redds at specific locations?
Objectives:	Identify potential redd dewatering events
Results – expected or actual:	Digital files with a final report providing an analysis of the data.
Data collection methods:	In the fall and winter 2009-2010 field crews will locate salmon redds in major spawning areas on the 3 streams and mark with GPS. Existing IFIM models developed by Gard, et.al. will be used to estimate potential redd dewatering events at those sites.
Data management:	Digital files and a final report will be archived by Mark Gard (FWS Sacramento)
Assessment:	Identify potential redd dewatering events
Use of information in future decision making:	This information will be used to inform (b)(2) water management decisions.
NMFS OCAP BO RPA	No