Draft CVPIA Fiscal Year 2012 Annual Work Plan

June 20, 2011

Program Title:

Flow Fluctuation – CVPIA Section 3406(b)(9); and Reservoir Storage – CVPIA Section 3406(b)(19)

Responsible Entities:

Staff Name	Agency	Role
Paul Fujitani	*USBR*	*Lead*
Roger Guinee	*USFWS*	*Co-Lead*

Program Goals and Objectives for FY 2012

. 1. The program goal is to develop and implement a program to eliminate, to the extent possible, losses of anadromous fish due to flow fluctuations caused by the operation of any Central Valley Project storage or re-regulating facility. There is currently no funding specifically for reservoir storage (b)(19). However, 3406 (b)(2) studies for dedication and management of project yield consider reservoir storage. The source documents for these objectives are noted and their relationship, if any, to the CALFED Program Ecosystem Restoration Program Implementation Plan.

a. American River- Develop and implement a program to eliminate, to the extent possible, losses of anadromous fish (steelhead and fall-run Chinook salmon) due to flow fluctuations caused by the operation of Nimbus Dam. Have monthly American River Operations Work Group meetings to discuss flow in the rivers and temperature model results.

b. Stanislaus River- Develop and implement a program to eliminate, to the extent possible, losses of anadromous fish (steelhead and fall-run Chinook salmon) due to flow fluctuations caused by the operation of Goodwin Dam. Have Stanislaus River Group meetings to discuss flow in the rivers and temperature model runs. Evaluate instream flow needs of the Stanislaus River fishery.

Status of the Program

The (b)(9) program was established by the CVPIA in 1992, well before the current suite of Biological Opinion flow requirements and ramping rates were enacted. In it's current form the (b)(9) program helps ensure compliance with the NOAA Biological Opinion (2009), and short-term (b)(9) operations are often implemented that provide even more protections than are mandated by the Opinion.

The American River flow fluctuation study by California Department of Fish and Game (CDFG) on salmon and steelhead in the lower American River (December 11, 2001) is used by fisheries biologists and the American River Operations Group as guidance when discussing flows on the lower American River and water management of Folsom Reservoir.

The Stanislaus River flow fluctuation study was started in 1999 and completed in 2009.

The definition of CVPIA 3406 (b)(19) is to reevaluate existing operational criteria in order to maintain carryover storage at Sacramento and Trinity River reservoirs to protect and restore the anadromous fish of the Sacramento and Trinity Rivers in accordance with the mandates and requirements of this subsection and subject to the Secretary's responsibility to fulfill all project purposes, including agricultural water delivery.

The National Marine Fisheries Service issued its Biological Opinion on the Long-term Operations of the Central Valley Project and the State Water Project on June 4, 2009 (BiOp). The Reasonable and Prudent Alternative in the BiOp contains sets of actions determined by Shasta Reservoir end of September storage. The actions vary for Shasta Reservoir storages over 2,400,000 acre-feet (af), 2,400,000 af to 1,400,000 af, and under 1,900,000 acre-feet. These actions are specified to minimize storage impacts to the anadromous fish from water temperatures, minimum flows, and flow fluctuations.

The 2009 BiOp required Reclamation to establish a Stanislaus Operations Group (SOG) to provide a forum for real-time operational flexibility implementation of the alternative actions defined in the BiOp. The group assists to adaptively manage the flow schedule contained in the BiOp and work to minimize flow fluctuations on the Stanislaus River.

Adaptive Management

CVP water operations will be managed to minimize adverse impacts to anadromous fish from flow fluctuations based on real-time project objectives and fishery needs. As a matter of standard practice the ramping rates and flow criteria established in the BiOps and permits conditions will be met and fishery biologists will be consulted to minimize adverse operational effects. Although a formal adaptive management plan has not been adopted studies have been funded to help identify sensitive flow rates and fish rescue activities when flow reductions could strand or isolate fish.

Table 1. FY2012 Activities and Costs

	CVPIA Section: 3406 (b)(9)
	CVPIA Program: Flow Fluctuation Study

	2012 Requested Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Total Funding	$0	$0	$50,000	$0	$0	$50,000
Reclamation			$46,200	$0	$0	$46,200
Service			$3,800	$0	$0	$3,800
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other	$0	$0			$0	$0

AWP Activity Number	Type of Activity	# of FTE's	Activity Name & Description	Agency	NMFS OCAP RPA#	Performance Metric	Performance Target	2012 Requested Funding: State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
1.1	**Program Management**												
1.1.1		0.02	Develop and implement a program to eliminate to the extent possible losses of anadromous fish due to flow fluctionations caused by the operations of the CVP	BOR	II.4	b9:# Operational Changes to reduce fish loss due to flow fluctuation	unspecified	$0	$0	$2,200	$0	$0	$2,200
1.1.2		0.02	Develop and implement a program to eliminate to the extent possible losses of anadromous fish due to flow fluctionations caused by the operations of the CVP	FWS	I.2	b9:# Operational Changes to reduce fish loss due to flow fluctuation	unspecified	$0	$0	$3,800	$0	$0	$3,800

	Anticipated Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$6,000	$0	$0	$6,000
Reclamation			$2,200	$0	$0	$2,200
Service			$3,800	$0	$0	$3,800
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

*** List other funding source here:** None

	CVPIA Section: 3406 (b)(9)
	CVPIA Program: Flow Fluctuation Study

	2012 Requested Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Total Funding	$0	$0	$50,000	$0	$0	$50,000
Reclamation			$46,200	$0	$0	$46,200
Service			$3,800	$0	$0	$3,800
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other	$0	$0			$0	$0

AWP Activity Number	Type of Activity	# of FTE's	Activity Name & Description	Agency	NMFS OCAP RPA#	Performance Metric	Performance Target	2012 Requested Funding: State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
1.3	**Technical Support**												
1.3.1		0.07	Technical support on the Stanislaus River and coordination with FWS to minimize flow fluctuation impacts to the fishery.	BOR	III.1.3	b9:# Operational Changes to reduce fish loss due to flow fluctuation	unspecified	$0	$0	$14,000	$0	$0	$14,000
1.3.2		0.07	Technical support on the American River and coordination with FWS to minimize flow fluctuation impacts to the fishery.	BOR	II.4	b9:# Operational Changes to reduce fish loss due to flow fluctuation	unspecified	$0	$0	$14,000	$0	$0	$14,000

	Anticipated Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$28,000	$0	$0	$28,000
Reclamation			$28,000	$0	$0	$28,000
Service			$0	$0	$0	$0
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

*** List other funding source here:** None

	CVPIA Section: 3406 (b)(9)
	CVPIA Program: Flow Fluctuation Study

	2012 Requested Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Total Funding	$0	$0	$50,000	$0	$0	$50,000
Reclamation			$46,200	$0	$0	$46,200
Service			$3,800	$0	$0	$3,800
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other	$0	$0			$0	$0

AWP Activity Number	Type of Activity	# of FTE's	Activity Name & Description	Agency	NMFS OCAP RPA#	Performance Metric	Performance Target	2012 Requested Funding: State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
1.5	**Research (Evaluations, Studies, Investigations)**												
1.5.1		0.04	American River flow studies and monitoring by Reclamation , DFG, FWS, for salmon and steelhead. Funds managed by MP-150	BOR	II.4	b9:# Operational Changes to reduce fish loss due to flow fluctuation	unspecified	$0	$0	$8,000	$0	$0	$8,000
1.5.2		0.04	Stanislaus river flow studies and monitoring by Reclamation , DFG, FWS for salmon and steelhead. Funds managed by MP-150	BOR	III.1.3	b9:# Operational Changes to reduce fish loss due to flow fluctuation	unspecified	$0	$0	$8,000	$0	$0	$8,000

	Anticipated Funding: State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$16,000	$0	$0	$16,000
Reclamation			$16,000	$0	$0	$16,000
Service			$0	$0	$0	$0
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

*** List other funding source here:** None

	CVPIA Section: 3406 (b)(9)
	CVPIA Program: Flow Fluctuation Study

	2012 Requested Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Total Funding	$0	$0	$50,000	$0	$0	$50,000
Reclamation			$46,200	$0	$0	$46,200
Service			$3,800	$0	$0	$3,800
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other	$0	$0			$0	$0

AWP Activity Number	Type of Activity	# of FTE's	Activity Name & Description	Agency	NMFS OCAP RPA#	Performance Metric	Performance Target	2012 Requested Funding					
								State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
1.12	**Monitoring**												
1.12.1		-	Ongoing monitoring by DFG and USFWS on the American River supporting fishery studies. Costs are included in 1.5.1 above	FWS	II.4	b9:# Operational Changes to reduce fish loss due to flow fluctuation	unspecified	$0	$0	$0	$0	$0	$0
1.12.2		-	Ongoing monitoring by DFG and USFWS on the Stanisalus River supporting fishery studies. Costs are included in 1.5.1 above	FWS	III.1.3	b9:# Operational Changes to reduce fish loss due to flow fluctuation	unspecified	$0	$0	$0	$0	$0	$0

	Anticipated Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$0	$0	$0	$0
Reclamation			$0	$0	$0	$0
Service			$0	$0	$0	$0
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

*** List other funding source here:** None

	CVPIA Section: 3406 (b)(9)
	CVPIA Program: Flow Fluctuation Study

	2012 Requested Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Total Funding	$0	$0	$50,000	$0	$0	$50,000
Reclamation			$46,200	$0	$0	$46,200
Service			$3,800	$0	$0	$3,800
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other	$0	$0			$0	$0

AWP Activity Number	Type of Activity	# of FTE's	Activity Name & Description	Agency	NMFS OCAP RPA#	Performance Metric	Performance Target	2012 Requested Funding					
								State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
1.13	**Modeling**												
1.13.1		-	Temperature modeling in the American. Costs included in 1.3.1 above	BOR	II.2	b9:# Operational Changes to reduce fish loss due to flow fluctuation	unspecified	$0	$0	$0	$0	$0	$0

	Anticipated Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$0	$0	$0	$0
Reclamation			$0	$0	$0	$0
Service			$0	$0	$0	$0
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

*** List other funding source here:** None

Table 2. Three-Year Budget Plan FY 2013 – 2015

Table 2. Three-Year Funding Plan FY 2013 – 2015 **($ amounts in thousands)**						
FY Year	**Description of Activities**	**Funding Needs**				
		RF	**W&RR**	**Other**	**DFG**	**DWR**
2013	1.1 Program Management 1.3 Technical Support 1.5 Research **Total**	6 28 16 50				
2014	1.1 Program Management 1.3 Technical Support 1.5 Research **Total**	6 28 16 50				
2015	1.1 Program Management 1.3 Technical Support 1.5 Research **Total**	6 28 16 50				

Note: The FY 2013 – 2015 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 pending appropriations and annual Restoration Fund collections are realized.

Table 3. Monitoring

Table 3 – Proposed Monitoring Activity	
Project Description:	Minimizing Flow Fluctuation Impacts – Fish survey and rescue operations
FY 2012 Project Complete?	Annual activity, ongoing
CVPIA annual work plan subtask number:	
Scope of the monitoring effort:	Varies depending on actual operations in 2012 – includes areas of the American River and Stanislaus River identified as potential stranding locations in need of field surveys under current water operations.
Product/deliverable:	Fish stranding data and rescue – identification of areas surveyed for stranding and findings of surveys.
Cost:	$16,000 (combined with Activity 1.5, Research)
Questions posed:	What flows or flow changes at what times of the year result in stranding? What specific areas of the rivers have stranding risks? Does stranding occur and if so what is the significance (number of individuals affected, species, sizes, proportion of population affected)? Can physical channel modifications reduce stranding risks and maintain or improve habitat?
Objectives:	Minimize stranding and isolation of fish and redd dewatering due to flow fluctuations
Results – expected or actual:	The highest risk period for stranding in these rivers is February through June so it is expected that if stranding occurs it will likely be during this time period. It is expected that stranding will only affect a small proportion of a population.
Data collection methods:	In-river surveys by boat, walking, visual observation, seining, and snorkeling.
Data management:	Field report data maintained by the individuals conducting the surveys.
Assessment:	Results of surveys tabulated if stranding is found to occur. Significance is assessed by comparing the estimated number of individuals affected to the estimated population size. If no stranding is found to occur then results are documented for future reference.
Use of information in future decision making:	Data used to determine river stage/flow thresholds that affect the fish. Results of past surveys considered in design of future operations scenarios.