

Draft CVPIA Fiscal Year 2009 Annual Work Plan

December 1, 2008

Program Title

Gravel Replacement Program – CVPIA Section 3406(b)(13)

Responsible Entities

Staff Name	Agency	Role
John Hannon	USBR	Lead
Dan Cox	USFWS	Co-Lead

Program Goals and Objectives for FY 2009

The program objectives follow:

- Increase the availability of spawning gravel and rearing habitat for Sacramento River Basin Chinook salmon and steelhead trout.
- Increase the availability of spawning gravel and rearing habitat for American River Basin Chinook salmon and steelhead trout.
- Increase the availability of spawning gravel and rearing habitat for Sacramento River Basin Chinook salmon and steelhead trout.

Source Documents that Support the Objectives

CALFED Bay-Delta Program EIS/EIR Ecosystem Restoration Plan, Vol. 3 Strategic Plan for Ecosystem Restoration; CALFED Bay-Delta Program Programmatic Record of Decision, Vol. 1 – Record of Decision and Attachments I Through 4; CALFED Bay-Delta Program Phase II Report, Final Programmatic EIS/EIR Technical Appendix; CVPIA Final PEIS; CVPIA Final Programmatic Environmental Impact Statement. (PEIS), Attachment F; CVPIA Draft PEIS, Technical Appendix Vol. 3; and, Upper Sacramento River Fisheries and Riparian Habitat Management Plan. The program has not had a direct relationship with CALFED.

Work performed in this program compliments the objectives in CVPIA Section 3406(b)(1). Staff involved in the two programs coordinate the development of the activities in the respective programs and share the data developed from this work.

Status of the Program

Spawning gravel placement sites in each of the three rivers have been identified based on key habitat location and on ready river access. All gravel placed in the rivers conform to criteria developed by the Fish and Wildlife Service, Department of Fish and Game and the National Marine Fisheries Service. These criteria relate to size and relative proportion of the various sizes, and to particular times of the year when the gravel can be placed. Gravel is placed on the

river bank in the Upper Sacramento River and in the Stanislaus River and subsequent high river flows distribute the gravel within the river channel. The gravel in the American River was deliberately placed on sites per prescribed engineering criteria anticipated to be beneficial to salmonids.

Gravel has been placed at three sites on the Upper Sacramento River - on the right bank approximately ¼-mile downriver from Keswick Dam, approximately two miles downriver from Keswick Dam immediately downriver from Salt Creek, and approximately 13 miles downriver from Keswick Dam in Redding about one mile downriver from Turtle Bay. The gravel is placed on the bank and high flows distribute the gravel within the river channel. To date more than 162,000 tons of gravel has been placed at these three sites.

Six thousand tons of gravel has been placed at three sites on the American River - at Sailor Bar, vicinity of Lower Sunrise Bridge, and at Sacramento Bar. The substrate at the sites was manipulated prior to gravel placement in order to improve permeability after the gravel was in place. The conditions in the regions where gravel was placed has been monitored and compared with conditions in adjacent areas. Reclamation contracted with the Water Forum (City of Sacramento) for assistance in the planning and future placement of spawning gravel.

Several sites have been selected for gravel placement in Stanislaus River in the reach within two miles downriver of Goodwin Dam and at Knights Ferry. Gravel has been placed by helicopter, by conventional truck hauling and by sluice delivery beginning in 1997. More than 17,000 tons of gravel has been placed to date.

Salmonids have been observed spawning on the placed gravel at each of the gravel placement sites. Aerial photography and onsite ground surveys have documented the location of salmon redds and juvenile salmonids have been observed rearing in the vicinity of the gravel.

New data is showing a lack of available juvenile rearing habitat in many rivers and may change the emphasis of the (b)(13) program in the future. The (b)(13) program may increasingly emphasize restoration of side channels, channel margins, and meander belts to address the lack of juvenile rearing habitat. Restoration of these habitats will be incorporated into the program as site specific needs are identified.

Prioritization

Program activities have been prioritized in case funding shortfalls occur. First priority actions are those that occur in the Sacramento River. Second priority actions are those that occur in the American River. Third priority actions are those that occur in the Stanislaus River. Gravel additions in the Stanislaus River would be the first to be cut. The rationale is that the Sacramento River contains all the listed salmonids while the American River and Stanislaus River contain only steelhead and fall-run Chinook. The Stanislaus River receives CVPIA funding for projects under the AFRP program while the American River has not had CVPIA restoration projects occur for a number of years. So the American River was ranked above the Stanislaus River.

FY 2008 Accomplishments

Accomplishments in the Upper Sacramento River included the purchase and placement of 8,300 tons of spawning gravel at the Salt Creek site, conducting substrate mapping of the river bottom, doing cross sections to examine channel evolution, and preparing a gravel budget for the river using a sediment transport model.

Accomplishments in the American River included the permitting for and placement of 7,000 tons of spawning gravel at Sailor Bar, completion of a gravel budget describing the amount of gravel blocked by Nimbus and Folsom Dams, completion of gravel permeability studies, and acquisition of aerial photography documenting Chinook spawning throughout the river

Accomplishments in the Stanislaus River included the mapping of Chinook redds on the added gravel, topographic survey of the three riffles created at Knights Ferry, and bathymetric mapping of the river (in cooperation with the Central California Area Office) for planning future gravel projects.

Table 1. FY 2009 Tasks, Costs, Schedules and Deliverables

Task or Subtask Number	Name of Activity	FTE	Description of Activity	Completion Date	Total Cost	Anticipated Funding Source Restoration Fund	Anticipated Funding Source Water & Related Resources
1.1	Program Management						
1.1.1		.25	USBR. Works with the FWS co-lead and Reclamation activity managers for each of the three river systems in which gravel placement is authorized.	9/30/2009	\$40,000	\$40,000	\$0
	<u>Subtotal Costs</u>				\$40,000	\$40,000	\$0
1.2	Program Support						
1.2.1		.3	Fish and Wildlife Service. Coordinates with Reclamation staff and is the primary point of contact with the Fish and Wildlife Service. Plans projects, conducts monitoring, oversees construction.	9/30/2009	\$50,000	\$50,000	\$0
	<u>Subtotal Costs</u>				\$50,000	\$50,000	\$0
1.3	Technical Support						
1.3.1		.15	activity manager for upper Sacramento River gravel projects	9/30/2009	\$25,000	\$25,000	\$0
1.3.2		.2	Person #1 MP-200 Engineering support for American and Stanislaus gravel placement	9/30/2009	\$30,000	\$30,000	\$0
1.3.3		.03	Person #2 MP-3800 Prepare contract paperwork for all gravel placement	9/30/2009	\$3,000	\$3,000	\$0
1.3.4		.1	Person # 3 MPCO Construction Inspection for American River Project	9/30/2009	\$15,000	\$15,000	\$0
	<u>Subtotal Costs</u>				\$73,000	\$73,000	0
1.4	Restoration Actions						
1.4.1			see 1.11				
	<u>Subtotal Costs</u>				\$0	\$0	\$0
1.7	Outreach and Public Involvement						
1.7.1		.03	Stanislaus River public involvement		\$5,000	\$5,000	\$0
		.02	American River public involvement		\$3,000	\$3,000	\$0

Task or Subtask Number	Name of Activity	FTE	Description of Activity	Completion Date	Total Cost	Anticipated Funding Source Restoration Fund	Anticipated Funding Source Water & Related Resources
	<u>Subtotal Costs</u>				\$8,000	\$8,000	0
1.8	Planning		Gravel placement in Sacramento, American, and Stanislaus Rivers.		\$8,000	\$8,000	\$0
	<u>Subtotal Costs</u>						
1.9	Environmental Compliance						
1.9.1		.06	American River dredger tailings acquisition permitting	2/1/2009	\$10,000	\$10,000	\$0
		.04	Sacramento River project permitting	7/1/2009	\$5,000	\$5,000	\$0
		.04	Stanislaus River gravel placement permits	7/1/2009	\$5,000	\$5,000	\$0
	<u>Subtotal Costs</u>				\$20,000	\$20,000	\$0
1.11	Construction						
1.11.1			Sacramento River Gravel Placement contract (10,000 tons at \$26/ton) High Priority	9/30/2009	\$260,000	\$260,000	\$0
1.11.2			American River Gravel Placement at Sailor Bar by DFG and/or other contractor (7,000 tons at \$37/ton) High Priority	9/30/2009	\$260,000	\$260,000	\$0
1.11.3			Stanislaus River Gravel Placement by DFG and other contract (5,200 tons at \$30/ton) Medium Priority- subject to 15% reduction	9/30/2009	\$156,000	\$156,000	\$0
	<u>Subtotal Costs</u>				\$676,000	\$676,000	\$0
1.12	Monitoring						
1.12.1			American River Monitoring of adult and juvenile fish use, gravel movement, hyporheic conditions, and invertebrate abundance (contract)	9/30/2009	\$80,000	\$80,000	\$0
1.12.2		.2	Stanislaus River Monitoring of fish use and gravel movement.	9/30/2009	\$40,000	\$40,000	\$0
1.12.3							

Task or Subtask Number	Name of Activity	FTE	Description of Activity	Completion Date	Total Cost	Anticipated Funding Source Restoration Fund	Anticipated Funding Source Water & Related Resources
	Subtotal Costs				\$120,000	\$120,000	\$0
1.13	Modeling						
1.13.1		.05	Flow modeling at American River restoration sites to evaluate habitat suitability for steelhead and Chinook pre and post project	9/30/2009	\$5,000	\$5,000	\$0
	Subtotal Costs				\$5,000	\$5,000	\$0
	Total Costs				\$1,000,000	\$1,000,000	\$0
	Reclamation				\$866,000	\$866,000	\$0
	Service				\$134,000	\$134,000	\$0
	Potential 15% reduction		\$156,000 from task 1.11.3		\$156,000	\$156,000	

Table 2. Program Budget

Task	Agency	FTE	LABOR			CONTRACTS			Total Costs
			Direct Salary and Benefits Costs	FWS Costs on Salary & Benefits (35%)	FWS Overhead Assess: 22% of Direct Salary and Benefits Costs	Contract, Grant, and Agreement Costs	FWS Overhead Assess: 6% Contract Costs	Misc. Costs	
1.1 Program Management	USFWS				0		0	0	
	USBR	.25	26,000	14,000	0	0	0	0	40,000
1.2 Program Support	USFWS	.3	26,639	14,344	9,016	0	0	0	50,000
	USBR		0	0	0	0	0	0	0
1.3 Technical Support	USFWS		0	0	0	0	0	0	0
	USBR	.29	47,450	25,550	0	0	0	0	73,000
1.7 Outreach and Public Involvement	USFWS		2,131	1,148	721	0	0	0	4,000
	USBR		2,600	1,400	0	0	0	0	4,000
1.8 Planning	USFWS		2,131	1,148	721	0	0	0	4,000
	USBR		2,600	1,400	0	0	0	0	4,000
1.9 Environmental Compliance	USFWS		2,664	1,434	902	0	0	0	5,000
	USBR		9,750	5,250	0	0	0	0	15,000
1.11 Construction	USFWS		26,639	14,344	9,016	0	0	0	50,000
	USBR		406,900	219,100	0	0	0	0	626,000
1.12 Monitoring	USFWS		10,656	5,738	3,607	0	0	0	20,000
	USBR		65,000	35,000	0	0	0	0	100,000
1.13 Modeling	USFWS		533	287	180	0	0	0	1,000
	USBR		2,600	1,400	0	0	0	0	4,000
USFWS Total Costs		.3	71,393	38,443	24,164	0	0	0	134,000
USBR Total Costs		.54	562,900	303,100	0	0	0	0	866,000
TOTAL ALL		.84	634,293	341,543	24,164	0	0	0	1,000,000

Table 3. Three Year Budget Plan FY 2010 – 2012

(\$ Thousands)

Year	Description of Activities	Requested RF Funding	Requested W&RR Funding
2010	A. Increase the availability of spawning gravel and rearing habitat for Sacramento River Basin Chinook salmon and steelhead trout. 10,000 tons of gravel placed B. Increase the availability of spawning gravel and rearing	\$1,100*	\$0

Year	Description of Activities	Requested RF Funding	Requested W&RR Funding
	habitat for American River Basin Chinook salmon and steelhead trout. 7,000 tons of gravel placed C. Increase the availability of spawning gravel and rearing habitat for Stanislaus River Basin Chinook salmon and steelhead trout. 3,000 tons of gravel placed		
2011	A. Increase the availability of spawning gravel and rearing habitat for Sacramento River Basin Chinook salmon and steelhead trout. 10,000 tons of gravel placed B. Increase the availability of spawning gravel and rearing habitat for American River Basin Chinook salmon and steelhead trout. 7,000 tons of gravel placed C. Increase the availability of spawning gravel and rearing habitat for Stanislaus River Basin Chinook salmon and steelhead trout. 3,000 tons of gravel placed	\$1,200*	\$0
2012	A. Increase the availability of spawning gravel and rearing habitat for Sacramento River Basin Chinook salmon and steelhead trout. 10,000 tons of gravel placed. B. Increase the availability of spawning gravel and rearing habitat for American River Basin Chinook salmon and steelhead trout. 7,000 tons of gravel placed C. Increase the availability of spawning gravel and rearing habitat for Stanislaus River Basin Chinook salmon and steelhead trout. 3,000 tons of gravel placed	\$1,300*	\$0

*Requested increases are reflective of rising costs of staff and supplies and are estimated to be a minimum of 10% increase per year.

Note: The FY 2010 – 2012 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.