DRAFT CVPIA Fiscal Year 2012 Annual Work Plan
August 1, 2011

Program Title

Trinity River Restoration Program (TRRP) - CVPIA Section 3406(b)(1) other/ (b)(23)

Responsible Entities

Staff Name	Agency	Role
Robin Schrock	USBR	TRRP Executive Director
Nancy Finley	USFWS	Arcata Field Office Supervisor

Program Goals and Objectives for FY 2012

The Trinity River Mainstem Fishery Restoration Final Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) completed in October 2000, and the Record of Decision (ROD), signed on December 19, 2000, established a comprehensive science-based adaptive management program to restore the Trinity River's fisheries. The program is designed to restore the attributes of a healthy, alluvial river system by implementing variable annual instream flows, physical channel rehabilitation, sediment management, watershed restoration and floodplain infrastructure improvements with the goal of restoring anadromous fish populations to pre-dam levels. Specific CPAR performance measures and goals include releasing from 369,000 to 815,000 acre-feet of water annually depending on the water year type, completing infrastructure improvements to safely pass these flows, constructing 47 bank rehabilitation and side channel rehabilitation projects, placing between 7,000 and 10,000 cubic yards of gravel annually, transport annually as much or more fine sediment as is delivered to the upper river from tributary watersheds.

Activities in Fiscal Year (FY) 2012 will focus on in-river construction activities and associated monitoring that support the program objective of increasing juvenile rearing habitat for salmonids. Specifically, CVPIA Restoration Funds will contribute to implementation of the following task in FY 2012:

Task 1.11.1. - Construct up to four channel rehabilitation projects and perform annual coarse sediment augmentation and watershed restoration**.** The channel rehabilitation projects will include a combination of habitat improvement projects that will focus on side channel construction, floodplain lowering, woody debris placement, spawning gravel processing and augmentation, and other juvenile rearing habitat enhancements. Annual coarse sediment augmentations are based on water year type and 2-dimensional modeling runs. It is anticipated that 3,500 - 5,000 cubic yards of coarse sediment will be placed through direct injection during high flows and an additional 3,000 – 4,000 cubic yards will be placed in conjunction with the construction of the channel rehabilitation sites.

Status of the Program

The TRRP staff is dedicated to planning and implementing restoration activities, science and monitoring, and program administration. Over the years, this Program has implemented many projects to improve anadromous fisheries habitat in the Trinity River Basin. The TRRP continues to collect valuable scientific information and implement restoration techniques to improve the success of this program and restoration

projects on other rivers.

In fiscal years 2001-2011, the CVPIA Restoration Fund has allocated $14,500,000 to the TRRP. Those funds, plus additional Federally appropriated funds and State funds, have been used to support the planning, environmental compliance, design, and construction activities at four bridge replacement sites, construction of 24 channel rehabilitation projects, and placement of 46,830 cubic yards of spawning gravel below Lewiston Dam. Table A - Coarse Sediment Augmentation Summary Per Fiscal Year provides a complete accounting of TRRP's coarse sediment augmentation program. In addition, extensive efforts have been made to develop an Integrated Assessment Plan that will guide future monitoring and evaluation activities in a more cost efficient and effective manner. Interrelationships between and among geomorphic, riparian, and biological resources have been more thoroughly identified than ever before, and relative priorities are being established to ensure that key components are adequately addressed even in the event of constrained budgets. The success of this program element has a direct bearing on the ability of the TRRP to measure longer-term progress towards fishery restoration goals.

Implementation of the ROD-defined flow schedules is a cornerstone of the TRRP's outcome based fishery restoration goals. The volumes of water (369,000-815,000 acre-feet and peak releases ranging between cfs and 11,000 cfs (cubic feet per second) are based on five water year types (Critically Dry, Dry, Normal, Wet, and Extremely Wet), and collectively are designed to create inter-annual variability that mimics the pre-dam snowmelt driven hydrograph and contributes to the desired healthy river attributes identified in the flow study. The program has made progress toward meeting goals of the program, although substantial additional effort is required to fully achieve performance goals. One of the major objectives of the ROD flows is to flush sand out of the substrate to improve habitat conditions. A recent sediment budget shows that reductions in the sand content of the channel bed and banks in the reaches downstream from Lewiston Dam has declined substantially since the 1980s, when dam-related fine impacts were at a maximum. This reduction in sand content indicates that ROD flows along with watershed restoration are meeting the Program's fine sediment objectives. For the 10 years since the signing of the Record of Decision (WY2001-WY2011) a total of 6.3 million acre feet of ROD water have been released. The river release allocation prior to the ROD was 340,000 acre-feet per year or 3.4 million acre feet for the 10 year post ROD period. Therefore, the ROD resulted in an additional 2.9 million acre feet of water being released over the last 10 years. However, there have not been enough instances of each water year to adequately address the adaptive management requirements of the program.

In addition to the flow accomplishments, the program has completed approximately 50% of the channel rehabilitation projects (24 out of 47 sites). Refer to Table B - Rehabilitation Site Construction Summary below for a summary of the mechanical channel rehabilitation site activities. Lastly, watershed and sediment management (gravel augmentation and fine sediment control) activities are ongoing annual requirements employed to achieve long term equilibrium of gravel movement through the system.

Based on monitoring performed in the lower Trinity River (Willow Creek weir) adult anadromous fish runs (hatchery and natural combined) have shown improvement since the Trinity River Record of Decision (ROD) was signed and implemented in 2000. Prior to the ROD (1992-1999), adult hatchery fall Chinook runs averaged 15,176 fish, post ROD (2000-2010) the average is 21,708 fish. Since 2007 over half the adult fall run Chinook were naturals. Prior to the ROD (1992-1999), natural adult fall Chinook runs averaged 15,000 fish, post ROD (2000-2010) the average is 13,597fish. The 2010 natural fall adult Chinook run was estimated to be 22,055 fish (goal 62,000) while the hatchery run was7,748 (goal 9,000). Natural adult Coho salmon averaged 599 pre ROD (1997-1999) and 2,242 post ROD, with an estimated 4,203 returning in 2010 (goal 1,400). Natural fall-run steelhead, which averaged 1, 894 pre ROD, more than doubled post ROD to 5,434. An estimated 6,613 returned in 2010 (goal 40,000). Since 2008

Steelhead and spring run Chinook have shown a steady increase in proportions of natural fish in their annual runs. Natural spring run Chinook salmon, monitored in the upper Trinity River near Junction City showed no change post ROD from 5,395 compared to pre ROD averages of 5,620. In 2010, 5,609 spring Chinook were estimated (goal 6,000) .

It is the nature of salmon populations to be highly cyclical and to be heavily influenced by environmental conditions, both in-river and in the ocean, and large error is associated with juvenile population estimates.. A relative measure may be the composition of hatchery versus wild produced fish in each annual juvenile salmonid outmigration run. Marked hatchery production has remained relatively constant during the post ROD period and serves as an evaluation tool for the program. Abundance estimates of Chinook salmon were 1,575,410 (± 326,300) at the upriver site (Pear Tree Bar) and 3,018,480 + 391,982) at the lower river site (Willow Creek). Coho salmon and steelhead outmigration runs remain dominated by hatchery fish, approximately 90% in most years. From 2007 to 2010 the numbers of natural Chinook smolts at Willow Creek increased from estimates of 2,000,000 to close to 3,500,000 (preliminary data).

Adaptive Environmental Assessment and Monitoring

The Trinity River, like other alluvial river systems, is complex and dynamic. Our understanding of the Trinity River and how it will respond to restoration actions is continually improving. Adaptive Environmental Assessment and Management (AEAM), the sixth element of the Trinity River restoration strategy, is a systematic approach for improving future management decisions by learning from outcomes of past actions. This section includes a description of significant achievements on various AEAM fronts. An adaptive management approach is being utilized to develop the annual flow release hydrograph and to determine the amount and location of annual coarse sediment augmentation.

Table A - Coarse Sediment Augmentation Summary By Fiscal Year

Fiscal Year	Gravel Augmentation Location	Gravel (CY)	Total per Year	Goal Met?
2003	Cableway	2,000	2,000	No
2006	Hatchery	1,600	1,600	No
2007	Hatchery	4,300	4,300	No
2008	High Flow Injections	2,300	14,400	Yes
	Lewiston-Dark Gulch	12,100		
2009	High Flow Injections	2,300	8,000	Yes
	Sawmill	5,700		
2010	High Flow Injections	3,100	14,500	Yes
	Lowden Ranch Area and Reading Creek	11,400		
		Total =	**44,800**	

Table B - Rehabilitation Site Construction Summary

Fiscal Year	Rehabilitation Site	Sites	Earth-work (CY)	Large Wood	River Miles	Acres Treated
2005	Hocker Flat (complete)	1	83,000	0	1.0	26
2006	Canyon Creek Sites (complete)	4	91,000	100	1.7	40
2007	Indian Creek Sites (complete)	3	77,800	200	2.8	31
2008	Lewiston and Dark Gulch Sites (complete)	8	56,900	200	3.7	42
2009	Sawmill and Steel Bridge Day Use (complete)	2	87,750	260	0.8	25
2010	Lowden, Trinity House Gulch, Reading Creek (complete)	5	202,600	300	2.4	36
2011	Wheel Gulch (In progress)	1	39,400	100	0.5	_7_
	Total =	**24**	**638,450**	**1,160**	**12.9**	**207**

Table 1. FY2012 Activities and Costs

	CVPIA Section: 3406 (b)(23)
	CVPIA Program: Trinity River Restoration

	2012 Requested Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Total Funding	$0	$0	$3,000,000	$10,382,000	$2,110,000	$15,492,000
Reclamation			$3,000,000	$10,382,000	$0	$13,511,000
Service *			$0	$0	$2,110,000	$2,110,000
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other	$0	$0			$0	$0

*The Service retains approximately 70% of their funding to cover staff and project related costs.

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		1.00	Responsibilities include implementation of the Record of Decision (ROD) for the Trinity River Mainstem Fishery Restoration Final EIS/EIR signed December 2000. Program activities are performed under the authority of CVPIA Section 3406(b)(23) for provisions of the ROD associated with implementation of annual instream flows. Other activities not specifically identified in Section 3406(b)(23) are performed under the authority of 3406(b)(1)(other). Budget components for FY2011 include personnel costs, office and vehicle lease charges, and Reclamation indirect charges.	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$656,000	$0	$656,000
1.1.2		1.00	-	BOR	-	-		$0	$0	$0	$0	$0	$0
1.1.3		1.00	-	BOR	-	-		$0	$0	$0	$0	$0	$0
1.1.4		1.00	-	BOR	-	-		$0	$0	$0	$0	$0	$0
1.1.5		1.00	-	BOR	-	-		$0	$0	$0	$0	$0	$0
1.1.6		1.00	-	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$395,108	$395,108
1.1.7		0.50	-	FWS	-	-		$0	$0	$0	$0	$0	$0
1.1.8		0.50	-	FWS	-	-		$0	$0	$0	$0	$0	$0
1.1.9		1.00	-	FWS	-	-		$0	$0	$0	$0	$0	$0
1.1.10		0.00	Office Operations	BOR	-	-		$0	$0	$0	$534,450	$0	$534,450
1.1.11		-	Other USBR Offices	BOR	-	-		$0	$0	$0	$71,260	$0	$71,260

	Anticipated Funding: State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$0	$1,261,710	$395,108	$1,656,818
Reclamation			$0	$1,261,710	$0	$1,261,710
Service			$0	$0	$395,108	$395,108
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

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

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
1.2	**Program Support**												
1.2.1		-	Trinity Management Council (TMC) - Group of agencies and tribes established by Trinity ROD to advise the Secretary on management of the program. Provides broad direction on funding prioritization and program emphasis. Includes labor, travel and per diem costs for 8 principle TMC members and technical representatives and other direct and indirect costs.	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$438,182	$0	$438,182
1.2.2		-	Technical Assistance to Tribes - Non-project specific funding in addition to that associated with TMC activities. This support allows the Hoopa Valley Tribe and the Yurok Tribe to fully administer and support on-going technical assessment activities related to the Trinity River Restoration Program's Adaptive Management (AEAM) of the program. This scope of work reflects the emphasis in overall planning and implementation of the Trinity Adaptive Environmental Management and Assessment Program (AEAMP), as well as policy deliberations, technical analysis, and coordination within Tribal government.	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$600,000	$0	$600,000
1.2.3		-	Trinity Adaptive management Working Group - Trinity Adaptive Management Working Group (TAMWG) - A chartered FACA group of involved agencies and stakeholders. Includes travel and per diem costs for 15-20 members and administrative support costs. Funded through the USFWS.	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$30,000	$30,000

	Anticipated Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$0	$1,038,182	$30,000	$1,068,182
Reclamation			$0	$1,038,182	$0	$1,038,182
Service			$0	$0	$30,000	$30,000
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

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

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		1.00	Personnel costs associated with implementing the Record of Decision (ROD) for the Trinity River Mainstem Fishery Restoration Final EIS/EIR signed December 2000. Budget components for FY2012 include personnel costs, office and vehicle lease charges, and USFWS indirect charges.	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$1,665,448	$0	$1,665,448
1.3.2		1.00	Same as above	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.3		1.00	Same as above	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.4		1.00	Same as above	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.5		1.00	Same as above	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.6		1.00	Same as above	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.7		1.00	Same as above	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.8		1.00	Same as above	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.9		1.00	Same as above	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.10		1.00	Same as above	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.11		0.50	Same as above	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$575,287	$575,287
1.3.12		0.50	Same as above	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.13		0.75	Same as above	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$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
1.3.14		0.50	Same as above	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.15		0.25	Same as above	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.16		0.50	Same as above	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.17		0.10	Same as above	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.18		6.00	Same as above	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$0	$0
1.3.19		0.00	Independent Review Committees - Includes objective peer reviews by a Science Advisory Board, expert review panels, and sub-program review panels.	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$130,000	$0	$130,000

	Anticipated Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$0	$1,795,448	$575,287	$2,370,735
Reclamation			$0	$1,795,448	$0	$1,795,448
Service			$0	$0	$575,287	$575,287
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

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

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
1.4	**Restoration Actions**												
1.4.1		-	Rehabilitation Construction (Complete sites 25 through 29)	BOR	-	b23:Channel Rehabilitation	47	$0	$0	$2,650,000	$0	$0	$2,650,000
1.4.2		-	Large Wood Debris Supply for 2013 sites	BOR	-	b23:Riparian Corridor Improvements	unspecified	$0	$0	$0	$150,000	$0	$150,000
1.4.3		-	CEQA Mitigation for 2013 sites	BOR	-	b23:Riparian Corridor Improvements	unspecified	$0	$0	$0	$325,000	$0	$325,000
1.4.4		-	Coarse Sediment Introductions for 2013 activities	BOR	-	b23:Coarse Sediment Placement (annual) (CU. YDS.)	10,000	$0	$0	$0	$267,823	$0	$267,823
1.4.5		-						$0	$0	$0	$0	$0	$0
1.4.6		-	Wateshed Implementation on 2012 projects	BOR	-	b23:Fine sediment reduction (annual) (CU. YDS.)	10,000 - 20,000	$0	$0	$350,000	$521,000	$0	$1,000,000

	Anticipated Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$3,000,000	$1,392,823	$0	$4,392,823
Reclamation			$3,000,000	$1,392,823	$0	$4,392,823
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

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		-	Habitat mapping	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$43,006	$0	$43,006
1.5.2		-	Habitat mapping	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$243,007	$243,007
1.5.3		-	Redd and Carcass Survey	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$79,667	$0	$79,667
1.5.4		-	Redd and Carcass Survey	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$173,090	$173,090
1.5.5		-	Juvenile Salmonid Spatial Density	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$167,860	$167,860
1.5.6		-	Chinook Coded Wire Tagging	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$260,937	$0	$260,937
1.5.7		-	Cold Water Volume Analysis	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$25,000	$0	$25,000
1.5.8		-	Map & Quantify Riparian Vegetation	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$150,546	$0	$150,546
1.5.9		-	Water Year Specific Activities	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$75,000	$0	$75,000
1.5.10		-	Bed Scour & Mobility	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$226,016	$0	$226,016
1.5.11		-	Juvenile Disease Assessment	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$31,009	$0	$31,009
1.5.12		-	Juvenile Disease Assessment	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$30,312	$30,312
1.5.13		-	Harvest Monitoring	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$359,393	$359,393
								Anticipated Funding					
								State Cash	**State In-Kind**	**Restoration Fund**	**Water and Related Resources**	**State or Other Sources***	**Total All Sources**

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
							Subtotal Funding	$0	$0	$0	$891,181	$973,662	$1,864,843
							Reclamation			$0	$891,181	$0	$891,181
							Service			$0	$0	$973,662	$973,662
							CA DFG	$0	$0			$0	$0
							CA DWR	$0	$0			$0	$0
							Other*	$0	$0			$0	$0
							*** List other funding source here:**	None					

1.6	**Land, Water, Conveyance Acquisitions**												
1.6.1		-	Realty Acquisitions(Contracts, Easements) for 2013 sites	BOR	-	b23:Channel Rehabilitation	47	$0	$0	$0	$170,000	$0	$170,000
								Anticipated Funding					
								State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
							Subtotal Funding	$0	$0	$0	$170,000	$0	$170,000
							Reclamation			$0	$170,000	$0	$170,000
							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					

1.7	**Outreach and Public Involvement**												
1.7.1		-	Public Education and Outreach/Website	BOR	-	-		$0	$0	$0	$100,000	$0	$100,000
1.7.2		-	TRRP Bi-Annual Science Symposium	BOR	-	-		$0	$0	$0	$10,000	$0	$10,000
								Anticipated Funding					
								State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
							Subtotal Funding	$0	$0	$0	$110,000	$0	$110,000
							Reclamation			$0	$110,000	$0	$110,000
							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					

1.8	**Planning**												
1.8.1		-	-	-	-	-	-	$0	$0	$0	$0	$0	$551,072
1.8.2		-	NEPA/CEQA and Permits for 2013 sites	BOR	-	b23:Channel Rehabilitation	47	$0	$0	$0	$65,000	$0	$65,000
								Anticipated Funding					
								State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
							Subtotal Funding	$0	$0	$0	$616,072	$0	$616,072
							Reclamation			$0	$616,072	$0	$616,072
							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					

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
1.9	**Environmental Compliance**												
1.9.1	-		CEQA Compliance for 2013 sites	BOR	-	b23:Channel Rehabilitation	47	$0	$0	$0	$295,000	$0	$295,000
1.9.2	-		Cultural Resource Compliance for 2013 sites	BOR	-	b23:Channel Rehabilitation	47	$0	$0	$0	$50,000	$0	$50,000
								Anticipated Funding					
								State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
							Subtotal Funding	$0	$0	$0	$345,000	$0	$345,000
							Reclamation			$0	$345,000	$0	$345,000
							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					
1.10	**Design**												
1.10.1	-		Design Data (Aerial Photography, Geologic/Hydro inv., etc.)	BOR	-	b23:Channel Rehabilitation	47	$0	$0	$0	$500,000	$0	$500,000
1.10.2	-		Rehabilitation Site Design/VE Study - Design of 2013/2014 rehabilitation sites	BOR	-	b23:Channel Rehabilitation	47	$0	$0	$0	$80,000	$0	$80,000
								Anticipated Funding					
								State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
							Subtotal Funding	$0	$0	$0	$580,000	$0	$580,000
							Reclamation			$0	$580,000	$0	$580,000
							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					
1.11	**Construction**												
1.11.1	-		Floodplain Structures Relocation, Mitigation, Repair	BOR	-	b23:Infrastructure Improve- ROD flows (369 TAF - 815 TAF)	369 - 815	$0	$0	$0	$200,000	$0	$200,000
								Anticipated Funding					
								State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
							Subtotal Funding	$0	$0	$0	$200,000	$0	$200,000
							Reclamation			$0	$200,000	$0	$200,000
							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					

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		-	Run-Size Estimation	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$623,249	$0	$623,249
1.12.2		-	Outmigrant	FWS	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$0	$110,943	$110,943
1.12.3		-	Outmigrant	BOR	-	b23:# Fall-run Chinook Natural Escapement	62,000	$0	$0	$0	$666,390	$0	$666,390
1.12.4		-	Implementation Monitoring and Analysis	BOR	-	b23:Coarse Sediment Placement (annual) (CU. YDS.)	10,000	$0	$0	$0	$226,016	$0	$226,016
1.12.5		-	Sedement Monitoring	BOR	-	b23:Fine Sediment annual mass (volume) balance (CU. YDS.)	>or = qty delivered to upper river fr tributaries	$0	$0	$0	$271,541	$0	$271,541
1.12.6		-	Streamgaging	BOR	-	b23:Minimum annual flows (ac-ft)	815,000	$0	$0	$0	$223,388	$0	$223,388

	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	$2,010,584	$110,943	$2,121,527
Reclamation			$0	$2,010,584	$0	$2,010,584
Service			$0	$0	$110,943	$110,943
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

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

1.13	**Modeling**												
1.13.1		-	FEMA/Trinity Co. Flood Compliance	BOR	-	b23:Minimum annual flows (ac-ft)	815,000	$0	$0	$0	$25,000	$0	$25,000
1.13.2		-	Temperature Model Support	FWS	-	b23:Minimum annual flows (ac-ft)	815,000	$0	$0	$0	$0	$25,000	$25,000

	Anticipated Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$0	$25,000	$25,000	$50,000
Reclamation			$0	$25,000	$0	$25,000
Service			$0	$0	$25,000	$25,000
CA DFG	$0	$0			$0	$0
CA DWR	$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
							*Other**	$0	$0			$0	$0
							*** List other funding source here:** None						

1.14 Adaptive Management

1.14.1	-	All activities reported under Sections 1.5 (Research, Studies, etc.) and 1.12 (Monitoring) are intended to inform the adaptive management process.	-	-	-			$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						

1.15 Other/Data Management

1.15.1	-	Data Management and Maintenance	BOR	-	-			$0	$0	$0	$75,000	$0	$75,000
								Anticipated Funding					
								State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
							Subtotal Funding	$0	$0	$0	$75,000	$0	$75,000
							Reclamation			$0	$75,000	$0	$75,000
							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						

1.16 Unfunded Needs

								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 Funding Plan FY 2013 – 2015

($ amounts in thousands)

FY Year	Description of Activities	Funding Needs				
		RF	W&RR	Other	DFG	DWR
2013	1.1		1,300,000	406,000		
	1.2		1,100,000	30,000		
	1.3		2,200,000	274,000		
	1.4	2,000,000	2,800,000	0		
	1.5		1,020,000	886,000		
	1.6		175,000	0		
	1.7		114,000	0		
	1.8		635,000	0		
	1.9		355,000	0		
	1.10		593,000	0		
	1.11		206,000	0		
	1.12		2,070,000	104,000		
	1.13		52,000	0		
	1.14		80,000	0		
	1.15		0	0		
	Total	2,000,000	12,700,000	1,700,000		
2014	1.1		1,300,000	406,000		
	1.2		1,100,000	30,000		
	1.3		2,200,000	274,000		
	1.4	2,000,000	2,800,000	0		
	1.5		1,020,000	886,000		
	1.6		175,000	0		
	1.7		114,000	0		
	1.8		635,000	0		
	1.9		355,000	0		
	1.10		593,000	0		
	1.11		206,000	0		
	1.12		2,070,000	104,000		
	1.13		52,000	0		
	1.14		80,000	0		
	1.15		0	0		
	Total	2,000,000	12,700,000	1,700,000		
2015	1.1		1,300,000	406,000		
	1.2		1,100,000	30,000		
	1.3		2,200,000	274,000		
	1.4	2,000,000	1,300,000	0		
	1.5		620,000	886,000		
	1.6		175,000	0		
	1.7		114,000	0		
	1.8		635,000	0		
	1.9		355,000	0		
	1.10		593,000	0		
	1.11		206,000	0		

	1.12 1.13 1.14 1.15 **Total**	 2,000,00	1,570,000 52,000 80,000 0 10,300,000	104,000 0 0 0 1,700,000		

Program Name: Trinity River Restoration Program

Table 3. FY 2012 CVPIA Monitoring Projects (supplement to FY 2012 Annual Work Plans)

Project Description:	Sediment transport monitoring to develop total sediment load estimates (for gravel and sand) associated with the annual high flow releases.
FY 2011 Project Complete?	Final report due in December.
CVPIA annual work plan subtask number:	1.12.1
Scope of the monitoring effort:	Trinity River – 4 locations.
Product/deliverable:	Digital database with quality controlled monitoring data, and a final report that provides an analysis of the data.
Cost:	271,541 (assuming normal water year)
Questions posed:	Have we met our sediment management objectives? Are we adding enough gravel? Are we reducing the total sand storage in the river?
Objectives:	Quantify total load and sediment budget for coarse and fine sediment. Use results to improve our ability to predict sediment transport associated with future high flow releases.
Results – expected or actual:	See deliverables. Data also feeds additional analyses conducted by the restoration program.
Data collection methods:	Synoptic sampling at 4 locations following USGS protocols. Samples collected from a boat mounted crane at temporary cableways.
Data management:	Quality controlled data delivered in an Access database developed to interface with the central database for the program for easy upload. Final report is archived in the digital document library. All data / reports are available to the public via the restoration program website.
Assessment:	Sediment transport rates are changing in response to implementation of restoration actions.
Use of information in future decision making:	Information used to plan gravel augmentation projects, improve our ability to predict sediment transport in response to management actions (e.g. high flow releases) and link management actions to program goals.
NMFS OCAP BO RPA	No

Program Name: Trinity River Restoration Program

Table 3. FY 2012 CVPIA Monitoring Projects (supplement to FY 2012 Annual Work Plans)

Project Description:	Outmigration
FY 2011 Project Complete?	Field work just completed, analyses started
CVPIA annual work plan subtask number:	1.12.1
Scope of the monitoring effort:	Whole Trinity River System, North Fork ,Willow Creek
Product/deliverable:	An annual final Report from HVT, and one from YT & USFWS documenting the results of the monitoring activity
Cost:	726,000
Questions posed:	Has timing of outmigration and / or peak period of outmigration shifted with ROD flows? Has abundance changed in response to ROD flows or rehabilitation efforts? How has the smolt to adult ratio shifted in response to rehabilitation actions?
Objectives:	To monitor success of rehabilitation efforts on smolt production
Results – expected or actual:	As conditions in river improve we predict that outmigration numbers will increase. Trend analyses over a 10 year period may be used to answer the above questions.
Data collection methods:	Rotary screw traps
Data management:	Database maintained by HVT and USFWS
Assessment:	Timing of outmigration, peak period of outmigration, estimate of abundance during peak period
Use of information in future decision making:	Long term assessment , cannot be used for short term decision making
NMFS OCAP BO RPA	no

Program Name: Trinity River Restoration Program

Table 3. FY 2012 CVPIA Monitoring Projects (supplement to FY 2012 Annual Work Plans)

Project Description:	Implementation monitoring
FY 2011 Project Complete?	Yes
CVPIA annual work plan subtask number:	1.12.1
Scope of the monitoring effort:	Determine fate of gravel introduced during high flow events
Product/deliverable:	Bathymetric data in the vicinity of gravel augmentations
Cost:	$226,016
Questions posed:	Where does gravel introduced at specific locations during high flow events get deposited? Does the gravel clear from the pools where it is introduced?
Objectives:	Guide implementation of the gravel augmentation component of the Program
Results – expected or actual:	Maps and aerial photography showing regions of deposition and erosion of the bed
Data collection methods:	Sonar with integrated GPS and aerial photography
Data management:	yes
Assessment:	Where does gravel introduced at specific locations during high flow events get deposited? Does the gravel clear from the pools where it is introduced?
Use of information in future decision making:	Guide implementation of the gravel augmentation component of the Program
NMFS OCAP BO RPA	No

Program Name: Trinity River Restoration Program

Table 3. FY 2012 CVPIA Monitoring Projects (supplement to FY 2012 Annual Work Plans)

Project Description:	Adults Run Size
FY 2011 Project Complete?	Field work ongoing for 2011 run
CVPIA annual work plan subtask number:	1.12.1
Scope of the monitoring effort:	Whole Trinity River System
Product/deliverable:	Annual final Reports from HVT, and CDFG, USFWS documenting the results of the monitoring activity
Cost:	623,249
Questions posed:	Has the in-river run size shifted with ROD flows? Has escapement changed with rehabilitation or ROD flows? Has abundance and distribution of redds changed in response to ROD flows or rehabilitation efforts? Has tribal or in river sport harvest increased in response to rehabilitation actions or ROD flows?
Objectives:	To monitor success of rehabilitation efforts on harvest and escapement.
Results – expected or actual:	As conditions in river improve we predict that in river run size, escapement and harvest will increase. Trend analyses over a 10 year period may be used to answer the above questions.
Data collection methods:	Weirs, carcass/redd surveys, sport and tribal harvest surveys, coded wire tagging (CWT) of 25% of hatchery Chinook, 100% marking of hatchery steelhead and Coho. Scales collected and analyzed..
Data management:	Database maintained by CDFG, HVT and YT, data used for fall Chinook in harvest management of Klamath stocks, PFMC uses data
Assessment:	In river run size, escapement and harvest numbers for Chinook, Coho, and steelhead. Proportion of hatchery spawners in wild, separation of fall and spring Chinook, separation of different aged Chinook using scales and CWT
Use of information in future decision making:	Long term assessment , cannot be used for short term decision making
NMFS OCAP BO RPA	Yes for coho

Program Name: Trinity River Restoration Program

Table 3. FY 2012 CVPIA Monitoring Projects (supplement to FY 2012 Annual Work Plans)

Project Description:	Stream Gaging network to provide real-time and final, quality controlled data for the Trinity River and tributaries.
FY 2011 Project Complete?	Ongoing
CVPIA annual work plan subtask number:	1.12.1
Scope of the monitoring effort:	Trinity River – 10 locations.
Product/deliverable:	Provisional real-time and final quality controlled data are available via the USGS website. Final flow data typically becomes available in February for the preceding water year. For select gages, the USGS provides final flow data on Sept. 1 to facilitate sediment transport records computations and reporting.
Cost:	223,388
Questions posed:	
Objectives:	
Results – expected or actual:	
Data collection methods:	
Data management:	Quality controlled data delivered in an Access database developed to interface with the central database for the program for easy upload. Final report is archived in the digital document library. All data / reports are available to the public via the restoration program website.
Assessment:	Data is used for a variety of purposes throughout the Trinity River Restoration Program (hydrology and hydraulic modeling, site design, sediment transport computations, habitat mapping, smolt outmigration, etc.).
Use of information in future decision making:	Data is used for a variety of purposes throughout the Trinity River Restoration Program (hydrology and hydraulic modeling, site design, sediment transport computations, habitat mapping, smolt outmigration, etc.).
NMFS OCAP BO RPA	No