



2016 ANNUAL WORK PLAN PUBLIC DRAFT

TITLE XXXIV OF PUBLIC LAW 102-575

JULY 9, 2015



U.S. Bureau of Reclamation
Mid-Pacific Region



U.S. Fish and Wildlife Service
Pacific Southwest Region

2016 ANNUAL WORK PLAN PUBLIC DRAFT

**CENTRAL VALLEY PROJECT IMPROVEMENT ACT
TITLE 34 OF PUBLIC LAW 102-575**

Version

April 20, 2015 - Initial Drafting from PM Charter Submissions

May 8, 2015 – Revised with PM Initial Corrections and Modifications

June 17, 2015 – Public Draft with Revisions after Agency Feedback

July 9, 2015 – Public Draft after Revisions from PM Fatal Flaw Review

U.S. Bureau of Reclamation, Mid-Pacific Region

U.S. Fish and Wildlife Service, Pacific Southwest Region

<http://www.usbr.gov/mp/cvpia>

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

The mission of the Fish and Wildlife Service is to work with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people.

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Introduction

The U.S. Bureau of Reclamation (Reclamation) and the U.S. Fish and Wildlife Service (Service) developed this Annual Work Plan (Work Plan) in coordination with the U.S. National Marine Fisheries Service (NMFS) and the State of California (State) represented by the Department of Fish and Wildlife (DFW) and Department of Water Resources (DWR), collectively the “Agencies”, to disclose and solicit feedback on activities planned for the upcoming fiscal year using the Central Valley Project Restoration Fund (CVPRF) and authorities under the Central Valley Project Improvement Act (CVPIA or Act), Title 34 of Public Law 102-575. A subsequent Accomplishment Report will describe the results from implementing this Work Plan. The CVPIA public website provides background information on the CVPIA and access to prior work plans and accomplishment reports at: <http://www.usbr.gov/mp/cvpia>.

Background

On October 30, 1992, President Bush signed the CVPIA to amend previous authorizations of the Central Valley Project (CVP) to include fish and wildlife protection, restoration, and mitigation as project purposes having equal priority with irrigation and domestic uses, and fish and wildlife enhancement as a project purpose equal to power generation. The Act established the Central Valley Project Restoration Fund (CVPRF or Restoration Fund) for donations from any source and revenues provided through payments by CVP water and power customers. Reclamation and the Service jointly implement the CVPIA for the Department of the Interior (Interior) in collaboration with State and local governments, Tribes, non-governmental organizations, and stakeholders. Section 3406 of the Act requires a number of activities to support fish and wildlife. This Work Plan provides a snapshot of section 3406 activities planned for the upcoming year.

This Work Plan structures CVPIA a by “Charters”. Individual Charters can represent a project with a discrete start and end, and can also include administration, management, grant programs, or long-term monitoring activities. Charters provide a high-level representation of the proposed activities including the intended outcome, total costs, and schedule. Charters are attached as Appendix A to this Work Plan. This Work Plan organized Charters into the general areas of:

- Fish Resources - Activities under section 3406(b) of the Act to improve natural production of anadromous fish in Central Valley rivers and streams;
- Refuge Water Supply Program - Activities under section 3406(d) of the Act to provide firm water supplies of suitable quality to maintain and improve wetland habitat areas on units of the National Wildlife Refuge System in the Central Valley of California; on the Gray Lodge, Los Banos, Volta, North Grasslands, and Mendota state wildlife management areas; and on the Grasslands Resources Conservation District in the Central Valley of California;
- Administration and Program Management - Activities to manage the CVPRF and the staffing required to maintain the different fish and refuge activities; and
- Independent Programs - including the:
 - Habitat Restoration Program (HRP) - Activities authorized under section 3406(b)(1) to mitigate the other adverse environmental impacts of the CVP on

Endangered Species Act (ESA) listed species as required under the biological opinions for the renewal of long-term water supply contracts,

- Ecosystem and Water System Operations Modeling Program (Modeling) - Activities authorized under section 3406(g) of the Act to develop readily usable and broadly available models and supporting data to evaluate the ecologic and hydrologic effects of existing and alternative operations of public and private water facilities and systems,
- San Joaquin River Restoration Program (SJRRP) - Use of the CVPRF authorized by section 10009(b)(2) of Public Law 111-11 for activities to implement the Stipulation of Settlement for NRDC, et al., v. Rodgers, et al., and
- Trinity River Restoration Program (TRRP) - Activities to implement the Trinity River flows under section 3406(b)(23) and to complete the channel restoration actions under the other adverse environmental impacts of the CVP provision within 3406(b)(1).

This Work Plan focuses on the Restoration Fund, but may include other funding sources where relevant, including Water and Related Resources (WRR), the Bay Delta Fund (BDF), and State cost-share. CVPIA activities that rely exclusively on resources other than the Restoration Fund will be reported in the Annual Accomplishment report, but may not appear in this Work Plan.

Status

In 2015, activities under the Fish Resource Area continued work to improve the scientific framework supporting decision making and improve integration within the requirements of the CVPIA for Central Valley fisheries. The Work Plan for 2016 starts the establishment of an integrated fisheries program through a process that provides base funding for individual provisions to meet labor and maintenance costs and then a combined pool of additional project funds prioritized by the Agencies across all fisheries authorities. The Refuge Water Supply Program will continue priority actions developed under a Stakeholder Technical Team and further refine coordination with stakeholders.

The 2016 President’s Budget included a request for \$49.5 million for the Restoration Fund. The budget included provisions to flexibly manage resources across different provisions. Base funding for individual provisions and the total available funding amounts for the different general areas under the CVPIA are shown below in Table 1.

Table 1 - Initial Base Alignment of the CVPRF

Area*	CVPRF	Justification
Fish Resources		
AFRP	\$3,500,000	Staffing Requirement, Some Provision-Specific Activities
Yield	\$400,000	Staffing Requirement
Instream	\$300,000	Staffing Requirement
Tracy	\$0	Funded by Water and Related
Clear Creek	\$1,450,000	Staffing Requirements, Some Gravel

Area*	CVPRF	Justification
		Augmentation, Development of the Phase 3C Restoration Project
Gravel	\$1,400,000	Staffing Requirement, Some Gravel Augmentation on some CVP Streams
CAMP	\$1,000,000	Staffing Requirement, Maintenance of Databases, and Monitoring activities
AFSP	\$1,500,000	Staffing Requirement, Some Capability for Small Screens
Prioritized Activities	\$11,500,000	Remaining Funding for Prioritization under an Integrated Fisheries Program
Refuge Water Supply		
Labor	\$1,600,000	Staffing Requirement
Prioritized Activities	\$19,000,000	Remaining Funding for Prioritization to meet Acquisition, Conveyance, and Facility Construction
Independent Programs		
HRP	\$1,500,000	Staffing Requirement and Grants
Modeling	\$600,000	Staffing Requirement and Model Maintenance
SJRRP	\$2,000,000	Authorized Amount under Public Law 111-11.
TRRP	\$1,500,000	Channel Construction Projects with Other Activities Supported by Water and Related Funding
Administration	\$2,000,000	Staffing Requirement, Management Charges, Funding Agreement Administrative Charges

*AFRP = Anadromous Fish Restoration Program under section 3406(b)(1) of the CVPIA, Yield = Dedicated Project Yield Program under section 3406(b)(2), Instream = Instream Water Acquisition Program under section 3406(b)(3), Tracy = Tracy Fish Facility Improvement Program under section 3406(b)(4), Clear Creek = Clear Creek Restoration Program under section 3406(b)(12), Gravel = Spawning and Rearing Habitat Restoration Program under section 3406(b)(13), CAMP = Comprehensive Assessment and Monitoring Program under section 3406(b)(16), AFSP = Anadromous Fish Screen Program under section 3406(b)(21), HRP = Habitat Restoration Program under section 3406(b)(1) "other", Modeling = Ecosystem and Water Operations Modeling under section 3406(g), SJRRP = San Joaquin River Restoration Program authorized by Public Law 111-11, TRRP = Trinity River Restoration Program under section 3406(b)(1) "other" and 3406(b)(23).

Charters include an estimate of future funding requirements in order to accomplish the proposed work. The specific budgets for future years (out-year budgets) are embargoed and cannot be disclosed or discussed. Out-year funding in the Charters shows the level of effort necessary to complete the work, but does not represent a commitment by Reclamation or the Service to provide those resources and actual future budgets may differ. The ability to obligate funds in this Work Plan will depend upon appropriations from the U.S. Congress, collections from water and power contractors, and the execution of non-federal cost-share where required.

Next Steps

To develop the Charters enclosed in this Public Draft Work Plan, the federal and state programs and project managers assembled proposed activities for the upcoming year based on an estimated budget. Activities were reviewed by the Agencies and then Charters were further revised to create this Public Draft. Reclamation and the Service retain final decision making on the content of this Work Plan and appreciate the feedback and assistance provided by our partner agencies. Following public review and feedback, this Work Plan will be revised, finalized, and posted to the CVPIA public website on or around September 30, 2015. Revisions and adjustments to the specific activities may occur during implementation depending on the ability to make progress and any priorities that emerge throughout the year. Reclamation and the Service will prepare an Annual Accomplishments Report at the conclusion of the 2016 Fiscal Year to disclose the results of implementation.

Fish Resource Area

The Fish Resource Area includes all provisions under section 3406(b) of the CVPIA to improve natural production of anadromous fish in Central Valley rivers and streams. Descriptions of the specific strategies and efforts to address the individual paragraphs within the Act are accessible online from the CVPIA public website: <http://www.usbr.gov/mp/cvpia>.

Reclamation and the Service coordinated with the Agencies to revise the implementation strategy for the Fish Resource Area with an Adaptive Resource Management (ARM) framework and a more integrated approach to the different activities under section 3406(b). In preparation for the ARM framework and to provide a transition between the historical practices of funding individual and independently managed programs, the Agencies reviewed existing reports on anadromous fish recovery and restoration to develop interim criteria for the selection of activities to fund in 2016. The ARM framework is designed to replace the interim criteria for subsequent years through a multi-disciplinary scientific process including agency representatives and stakeholders. The interim criteria for 2016 include prioritizing:

- Ongoing Efforts: activities where disruption or delay would result in substantial losses to the existing investment of resources;
- Central Valley Wide Numeric Doubling: watersheds with the greatest ability to contribute to the overall natural production doubling goal of anadromous fish in the Central Valley including the American River, Feather River, Sacramento River, Stanislaus River, and Yuba River;
- Watershed Numeric Doubling: additional smaller watersheds with the greatest potential to achieve watershed doubling targets of anadromous fish including Cottonwood Creek, Cow Creek, Deer Creek, and Mill Creek;
- Special-Status Species: additional watersheds with species listed, or proposed for listing, as endangered or threatened under the Endangered Species Act including Clear Creek, Battle Creek, and some of the aforementioned watersheds; and
- High Priority: Activities not specifically enumerated above, but identified as the most important in source documentation including the Final Plan for the Anadromous Fish Restoration Program, Ecosystem Restoration Program Conservation Strategy, NMFS

Recovery Plans, preliminary ARM decision support models, and the California Water Action Plan.

Application of the criteria results in consideration of 11 watersheds, 32 ongoing activities, and 35 potential new categories of actions. More information will be available upon release of the ARM Framework. Table 2 shows the resulting Charters and 2016 funding requirements and funding sources. Charters for program and project staff and administration are listed in a separate section.

Table 2 – Fish Resource Area Implementation Charters

Watershed and Charter	CVPRF	WRR	State/Local	Total
Central Valley Wide				
b1 Bay-Delta Sturgeon Age, Growth, and Microchemistry	\$238,500			\$238,500
b1 Sturgeon Population Dynamics and Demographics Evaluation	\$121,900			\$121,900
b2 operations	\$320,213			\$320,213
CAMP rotary screw trap Platform enhancements	\$100,000			\$100,000
Instream Water Acquisition	\$500,000			\$500,000
Pacific States Marine Fisheries Commission database support	\$116,000			\$116,000
AFSP Base Projects	\$760,676			\$760,676
CVP watershed adult salmon escapement database	\$168,679			\$168,679
American River				
American River rotary screw trap monitoring	\$190,800			\$190,800
American River SDM model development and monitoring	\$975,000			\$975,000
American River Spawning and Rearing Habitat FY16	\$600,000			\$600,000
Battle Creek				
b1 North Fork Battle Creek Natural Barrier Removal	\$101,206		\$900,000	\$1,001,206
Clear Creek				
b12 Clear Cr Spawning Gravel Injection	\$123,133	\$144,984		\$268,117
b12 Clear Creek Adaptive Management	\$253,509			\$253,509
b12 Clear Creek Flows	\$9,874		\$10,000	\$19,874
b12 Clear Creek McConnell Foundation		\$10,000		\$10,000
b12 Lower Clear Cr Aquatic Habitat and Mercury Abatement Project	\$26,000		\$2,250,000	\$2,276,000
b12 Clear Creek Channel Maintenance Flows (aka EWP)	\$205,378			\$205,378

Watershed and Charter	CVPRF	WRR	State/Local	Total
b12 Clear Creek Stream Channel Restoration including Phase 3C	\$896,900			\$896,900
Consumnes River				
b1 Cosumnes River Adult Escapement and Juvenile Outmigration Monitoring	\$63,600			\$63,600
Merced River				
b1 Henderson Park Channel & Floodplain Restoration	\$250,077			\$250,077
Mokelumne River				
b1 Mokelumne Spawning Habitat Improvement	\$106,000		\$62,500	\$168,500
Sacramento Upper Mainstem				
b1 Green Sturgeon Juvenile Investigation	\$111,127			\$111,127
b1 Sacramento River Redd & Life History Monitoring	\$136,740			\$136,740
Sacramento River Habitat Restoration at Anderson River Park	\$1,700,000			\$1,700,000
Sacramento River Salmonid Habitat Restoration at Reading/Rancheria Island	\$1,450,000			\$1,450,000
Sacramento River Salmonid Spawning and Rearing Habitat Restoration	\$600,000			\$600,000
Quantify adult winter-run Chinook salmon escapement on the Sacramento River	\$199,944			\$199,944
Sacramento River - Red Bluff Diversion Dam rotary screw trap monitoring	\$802,243			\$802,243
Sacramento-San Joaquin Delta				
TFFIP Implementation		\$430,066		\$430,066
Delta Salmon Survival Study	\$640,128			\$640,128
San Joaquin Lower Mainstem				
b1 San Joaquin River Sturgeon Habitat Assessment	\$168,284			\$168,284
Stanislaus River				
b1 Knights Ferry Floodplain Restoration Project	\$283,634			\$283,634
b1 Sturgeon Barrier Evaluation	\$3,477			\$3,477
Stanislaus River rotary screw trap monitoring	\$197,000			\$197,000
Stanislaus River Salmonid Spawning and Rearing Habitat Restoration	\$300,000			\$300,000
Tuolumne River				
b1 Tuolumne River: Dos Rios Floodplain Restoration	\$447,320		\$421,000	\$868,320

Watershed and Charter	CVPRF	WRR	State/Local	Total
Upper Sacramento and Tributaries				
b1 Juvenile Salmonid Acoustic Tagging	\$174,270			\$174,270
b1 Impacts of Marijuana Activity on Fish	\$116,388			\$116,388
Yuba River				
b1 Yuba River Daguerre Alley Floodplain Restoration Project	\$237,440			\$237,440
b1 Yuba River Hammon Bar Velocity Validation	\$6,953			\$6,953
b1 Yuba River Juvenile Salmonid Rearing Habitat Restoration	\$159,000			\$159,000
b1 Yuba River Narrows Restoration Project	\$1,070,600			\$1,070,600
Grand Total	\$14,931,994	\$585,050	\$3,643,500	\$19,160,545

*CVPRF = Central Valley Project Restoration Fund, WRR = Water and Related Resources.

Additional Fish Resource Area projects may be undertaken if funding allows. Uncertainties include environmental compliance and permitting requirements, construction costs, and the reliability of collections for the Restoration Fund. Table 3 shows known potential projects.

Table 3 – Additional Fisheries Projects for 2016 Depending on Funding

Charter	Total
b1 Stanislaus Migratory Corridor Rehabilitation	\$381,600
b1 Tuolumne River - River Mile 44 Spawning and Rearing Habitat Restoration	\$213,590
b1 Merced River Instream & Off-Channel Drought-Resilient Habitat Rehabilitation	\$312,912
Sacramento River Salmonid Habitat Additional Project at one of five sites	\$600,000
AFSP Additional Projects	\$200,000

The 2016 Work Plans incorporated the following Fish Resource Area related comments and specific project recommendations from 2015:

1. Prioritization and Funding Justification - this Work Plan modifies the budget process for explicit criteria for the types of projects that would be prioritized for funding; and
2. Prioritization of Projects that Constrain Project Operations - interim priorities include the main CVP streams as well as special status anadromous fish species.

Incorporation of 2015 comments requesting specific fish production estimates as the result of specific actions was not possible at this time, but the Agencies expect that ongoing work under the ARM framework can incorporate that concept in subsequent versions. Reclamation and the Service will continue to work with stakeholders to refine and scope future work in the implementation of the Fish Resource Area of the CVPIA including the evaluation of specific project proposals.

Refuge Water Supply Program

The Refuge Water Supply Program (RWSP) includes all provisions under section 3406(d) of the CVPIA to provide firm water supplies of suitable quality to maintain and improve wetland habitat areas on units of the National Wildlife Refuge System in the Central Valley of California; on the Gray Lodge, Los Banos, Volta, North Grasslands, and Mendota state wildlife management areas; and on the Grassland Resources Conservation District in the Central Valley of California.

The Act specifies two types of water delivery requirements. Section 3406(d)(1) “Level 2” requires the quantity and delivery schedules of water measured at the boundaries of each wetland habitat area shall be in accordance with Level 2 of the ‘Dependable Water Supply Needs’ table for those habitat areas as set forth in the Refuge Water Supply Report and two-thirds of the water supply needed for full habitat development for those habitat areas identified in the San Joaquin Basin Action Plan/Kesterson Mitigation Action Plan Report. Section 3406(d)(2) “Incremental Level 4” requires the quantity and delivery schedules of water measured at the boundaries of each wetland habitat area shall be in accordance with Level 4 of the ‘Dependable Water Supply Needs’ table for those habitat areas as set forth in the Refuge Water Supply Report and the full water supply needed for full habitat development for those habitat areas identified in the San Joaquin Basin Action Plan/Kesterson Mitigation Action Plan Report acquired through voluntary measures. A full Level 4 water supply (Level 2 plus Incremental Level 4) will provide for optimum habitat management to support a broad range of species including targeted threatened and endangered species. Components of the RWSP include:

- Water Acquisition: purchase, exchange, and transfer for Incremental Level 4 water supplies;
- Conveyance: groundwater pumping and the conveying (wheeling) of surface sources for Level 2 and Incremental Level 4 water supplies; and
- Facility Construction: infrastructure improvements to enable the delivery of full Level 4 water supplies.

Priorities have been discussed throughout the year through an Inter-Agency Refuge Water Management Team. In 2016, the RWSP will prioritize making full amount of Level 2 water supplies available. In the event of a drought where shortage provisions take effect, the full amount may consist of a 75% allocation of Level 2 and groundwater pumping and acquisition of Incremental Level 4 water. A Charter for “RWSP Emergency IL4 Groundwater Pumping” addresses a drought contingency. Remaining funds will seek water transactions at minimal additional cost to the RWSP, maintaining minimal activities on construction of conveyance facilities, and the RWSP component of the North Valley Regional Recycled Water Project (NVRWP) for long-term reliable Incremental Level 4 water supplies. Accomplishment of the NVRWP will require additional funding sources. Table 4 shows the proposed activities. Charters for program and project staff and administration costs are in a separate section.

Table 4 – Refuge Water Supply Implementation Charters

Program Components and Charters	CVPRF	SIK	Total
Level 2 Water Supply			

Level 2 Refuge Water Conveyance (FY2016)	\$13,784,464	\$81,000	\$13,865,464
RWSP Emergency IL4 Groundwater Pumping	\$1,500,000		\$1,500,000
<i>Subtotal</i>	<i>\$15,284,464</i>	<i>\$81,000</i>	<i>\$15,365,464</i>
Refuge Construction			
Refuge Cons - Sutter NWR	\$500,000		\$500,000
Refuge Cons - EBC Pumping Plant	\$270,000		\$270,000
<i>Subtotal</i>	<i>\$770,000</i>		<i>\$770,000</i>
Incremental Level 4			
Refuge Cons -NVRWP	\$3,500,000		\$3,500,000
Grand Total	\$19,554,464	\$81,000	\$19,635,464

*CVPRF = Central Valley Project Restoration Fund, SC = State Cost, SIK = State In-Kind, WRR = Water and Related Resources.

To accomplish the NVRWP, the RWSP will be unable to fund the acquisition of Incremental Level 4 beyond that required for emergency IL4 groundwater pumping and further construction activities on the Biggs-West Gridley conveyance facilities to the Gray Lodge Wildlife Area as shown in Table 5. The RWSP will be working with partners on strategies to meet these needs.

Table 5 – Refuge Water Supply Unfunded Needs

Charter	Total
Inc. Level 4 Water Purchases and L2 Exchanges	\$2,362,500
Inc. Level 4 Refuge Water Conveyance (FY2016)	\$1,808,648
Refuge Cons - Biggs-West Gridley/Gray Lodge Refuge	\$15,070,000

The 2016 Work Plans incorporated the following Refuge Water Supply Program specific comments from 2015:

- Prioritize Level 2: this Work Plan uses a more conservative estimate for Level 2 conveyance costs so that the budget reflects full capability without a likely need for realignment during implementation.

The Work Plan is not able to address the comments regarding increased funding levels. Reclamation and the Service will continue to work with the Interagency Refuge Water Management Team, Central Valley Joint Venture, and other stakeholders on strategies for prioritizing and maximizing the use of existing funding and providing opportunities to leverage resources.

Administration and Program Management

CVPIA Administration provides for the specific staff to collect funds, submit the overall budgets, coordinate between activities, administer the agreements with the Service, Reclamation and Service Regional management, and review and oversight of expenditures. The individual programs under the Fish Resource Area and the Refuge Water Supply Programs also require

staffing to prepare specific budgets, formulate and implement activities, and report on specific accomplishments. Table 6 shows the resulting budgets.

Table 6 – Fish, Refuge, and Fund Administration and Program Management

Program Area	CVPRF	SIK	WRR	Total
Fish				
b1 AFRP Program Administration and Management	\$3,005,693			\$3,005,693
b2 administration	\$79,495			\$79,495
Instream Water Purchase Administration	\$266,327			\$266,327
TFFIP Administration			\$122,413	\$122,413
b12 Clear Creek Program Management	\$110,201	\$47,090	\$99,016	\$256,307
b13 Program Admin	\$444,500			\$444,500
CAMP Program Manager	\$227,521			\$227,521
AFSP Administration	\$713,124			\$713,124
<i>Subtotal</i>	<i>\$4,846,860</i>	<i>\$47,090</i>	<i>\$221,429</i>	<i>\$5,115,379</i>
Refuge				
RWSP Administration	\$863,591			\$863,591
RWSP Technical Support	\$259,689			\$259,689
<i>Subtotal</i>	<i>\$1,123,281</i>			<i>\$1,123,281</i>
Fund				
CVPIA Administration	\$2,000,000			\$2,000,000
SDM Phase 2	\$201,250			\$201,250
<i>Subtotal</i>	<i>\$2,201,250</i>			<i>\$2,201,250</i>
Grand Total	\$8,171,391	\$47,090	\$221,429	\$8,439,910

*CVPRF = Central Valley Project Restoration Fund, SIK = State In-Kind, WRR = Water and Related Resources.

Independent Programs

Independent programs are not integrated with other provisions of the CVPIA. These programs generally have separate oversight and resources in addition to the CVPRF, and program-specific reporting and stakeholder coordination requirements.

Habitat Restoration Program

Reclamation and the U.S. Fish and Wildlife Service manage the HRP jointly with the Central Valley Project Conservation Program (CVPCP) with the overall objective of improving conditions for impacted species and habitats, excluding fish. The CVPCP and HRP utilize a proposal solicitation process to fund and carry out conservation actions within the areas served by the Central Valley Project, California. At the beginning of each annual funding cycle, a Funding Opportunity Announcement (FOA) is posted on www.grants.gov with a solicitation period of around 120 days. Table 7 shows the HRP Charters. Historical projects and reports

funded by the CVPCP and/or HRP and contact information for more information are available at: <http://www.usbr.gov/mp/cvpcp>.

Table 7 – Habitat Restoration Program Charters

Charter	CVPRF	Total
HRP Program Management and Compliance	\$355,294	\$355,294
HRP Protection, Restoration, & Captive Propagation Projects	\$932,240	\$932,240
HRP Research Projects	\$188,414	\$188,414
Total	\$1,475,948	\$1,475,948

Ecosystem and Water Operations Modeling Program

The goal of the Ecosystem and Water Systems Operations Models program is to develop readily usable and broadly available models and supporting data in order to 1) evaluate ecologic and hydrologic effects of existing and alternative water management strategies in the Sacramento, San Joaquin, and Trinity River watersheds; 2) improve scientific understanding of ecosystems in the Sacramento, San Joaquin, and Trinity watersheds; and 3) support the Interior Secretary's efforts in fulfilling the requirements of the CVPIA. The Program manages projects in conjunction and with in-kind services from State partners.

Table 8 – Modeling Program Charters

Charter	CVPRF	SIK	Total
FY16 CVPIA (g) Program Administration, Modeling Project Management, Technical Support, and Modeling	\$531,529	\$972,911	\$1,504,439
FY16 CalSim Technical Support	\$25,000		\$25,000
FY16 Temperature and Fisheries Model Technical Support	\$25,000		\$25,000
FY16 CalLite Technical Support	\$25,000		\$25,000
Total	\$606,529	\$972,911	\$1,579,439

San Joaquin River Restoration Program

The San Joaquin River Restoration Settlement Act (Title X, Subtitle A, Part I of Public Law 111-11), authorizes and directs implementation of the Settlement in *NRDC, et al., v. Rodgers, et al.* Section 10007 of the Settlement Act finds and declares that the Settlement satisfies and discharges all of the obligations of the Secretary contained in Section 3406(c)(1) of the CVPIA. Section 10009(b)(2) authorizes use of the CVP Restoration Fund in an amount not to exceed \$2,000,000 (October 2006 price levels) in any fiscal year. CVPIA funded activities for the SJRRP include the Charter Table 9

Table 9 – SJRRP Charter

Charter	CVPRF	Total*
SJRRP - Mendota Pool Bypass and Reach 2B Project	\$2,000,000	\$2,000,000

*The SJRRP uses multiple funding disclosed within SJRRP specific materials, not this Work Plan.

Trinity River Restoration Program

The Trinity River Restoration Program was founded in 2000 based on three comprehensive foundational documents: the Trinity River Flow Evaluation Final Report; the Trinity River Environmental Impact Statement; and the Trinity River Mainstem Fishery Restoration Record of Decision. These documents established a comprehensive science-based adaptive management program to restore the Trinity River’s fishery resources. The Program’s overarching goal is to restore anadromous fish populations to pre-dam levels. FY2015 activities that contribute to that end include mechanical channel rehabilitation, sediment management, and instream flow releases, and watershed restoration. Table 10 shows the TRRP Charter.

Table 10 – TRRP Charters

Charter	CVPRF	FWSA*	WRR	Total
Trinity River Restoration Program CVPIA Section 3406(b)(1)/(b)(23)		\$1,855,214	\$11,862,455	\$13,717,669
TRRP 2016 Project 1 Charter	\$1,500,000		\$270,000	\$1,770,000
Total	\$1,500,000	\$1,855,214	\$12,132,455	\$15,487,669

*FWSA = Fish and Wildlife Service Appropriations

Synthesis

Table 11 shows a summary of Restoration Fund planned budgets for Fiscal Year 2016 broken down by legislative provision and agency overseeing the funding.

Table 11 – Summary of Fiscal Year Restoration Fund Budgets by Legislative Provision and Agency

Provision	BOR	FWS	Grand Total
(b)(1) AFRP	\$21,671	\$6,045,529	\$6,067,200
(b)(2) Dedicated Yield	\$119,858	\$601,600	\$721,458
(b)(3) Instream Flows	\$538,806	\$559,021	\$1,097,827
(b)(12) Clear Creek Flows	\$149,133	\$556,922	\$706,055
(b)(12) Clear Creek Restoration	\$850,000	\$68,941	\$918,941
(b)(13) Gravel	\$4,994,500	\$421,750	\$5,416,250
(b)(16) CAMP	\$0	\$3,377,325	\$3,377,325
(b)(21) AFSP	\$460,603	\$1,013,197	\$1,473,800
(d)(1) Refuge Conveyance L2	\$13,081,271	\$1,063,672	\$14,144,943
(d)(2) Refuge Acquisition IL4	\$1,810,452	\$100,691	\$1,911,143
(d)(2) Refuge Conveyance IL4	\$152,760	\$33,065	\$185,825
(d)(5)-(1) Refuge Facility L2	\$586,170	\$4,599	\$590,769

Provision	BOR	FWS	Grand Total
(d)(5)-(2) Refuge Facility IL4	\$3,808,516	\$36,549	\$3,845,065
HRP (b)(1)	\$750,001	\$725,948	\$1,475,948
Modeling (g)	\$495,575	\$86,953	\$582,529
SJRRP (PL111-11)	\$2,000,000	\$0	\$2,000,000
TRRP (b)(1)	\$0	\$0	\$0
TRRP (b)(23)	\$1,500,000	\$0	\$1,500,000
Administration	\$1,370,770	\$830,480	\$2,201,250
Grand Total	\$32,690,085	\$15,526,241	\$48,216,326

Total programmed expenditures fall short of the total President's Budget by approximately \$1.3 million. Rapid escalation in construction costs, increases in refuge water conveyance costs, and uncertainty in collections due to drought warrant maintaining a small contingency.

References

Final Restoration Plan for the Anadromous Fish Restoration Program. U.S. Fish and Wildlife Service.

The 11 Priority Watersheds identified in the Fish Focus Group process.

The Ecosystem Restoration Program's *Conservation Strategy For Restoration of the Sacramento- San Joaquin River Delta, Sacramento Valley, and San Joaquin Valley Regions.*

The National Marine Fisheries Service's *Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-run Chinook salmon and Central Valley Spring-run Chinook salmon and the Distinct Population Segment of California Central Valley Steelhead.*

A list of Reasonable and Prudent Alternatives identified in the National Marine Fisheries Service's *Biological Opinion on the Operations, Criteria, and Plan (OCAP) for the Central Valley Project and the State Water Project.*

Elements contained in draft CVPIA Decision Support Model (Peterson 2014).

The *California Water Action Plan.* That plan describes high priority management activities the state of California is proposing to undertake as it manages resources within its boundary.

1989 Dependable Water Supply Refuge Report.

1989 San Joaquin Basin Action Plan.

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Appendix A – Description of Charter Information

Classification: classification of the Charter type according to an overall category and a project type.

Location: reference to a site name (where available) and a watershed.

Funding Years: fiscal years covered by the Charter.

Benefits Start Year: when the impacts of the Charter will be realized. Typically a project would become operational following construction, acquisition, or reporting (in the case of a study) phases of an effort.

Priority: Ranking of the Charter within a specific to provide an understanding of the relative importance of different efforts.

Partners: Listing of agencies and entities assisting in the planning and implementation of the Charter through the contribution of resources. Resources may include cost-share, in-lieu services, use of facilities, or other technical support during the development of a project.

Related Programs: list of related programs and activities supported by the Charter such as BDCP, RPA, Recovery Plans, CVJV, etc to provide an understanding of the relationship between the proposed Charter and other efforts by Federal, State, and local entities.

Authority: Provision under the CVPIA supported by the Charter that will allow the government to undertake the action and determine the relevant reimbursement and cost-share requirements.

- **Authority:** one or more legislative provisions for the action and the relative contribution to the different provisions within the legislation.
- **Percentage:** Fraction of the total Charter costs attributable to the Authority.
- **Description:** Justification for why the Charter is allowable under the Authority and for the specific fraction, if applicable.

Metric(s): Anticipated accomplishments from successful completion

Deliverables: anticipated documentation and timeline for key activities under the Charter, typically public documents and reports that would be referenced by title.

- **Date:** The estimated year and month when the deliverable will be available.
- **Title:** The anticipated name or citation of the deliverable.

Narrative: a one or two paragraph description of the Charter background, benefits, deliverables, additional information (e.g. cost basis), and changes since prior Charters, if any.

Data Management: Information on where reports and data for this Charter will be permanently housed and the relevant protocols for understanding the information.

Risks: Narrative or bulleted list of uncertainties and potential project management related issues that might change the scope, schedule, or budget.

Cost Estimate: summary of costs by fiscal year and fund. This table is automatically populated by the information in Resources Data.

Activities and Resources: cost estimates to undertake the activity.

- Type: category of resource, e.g. labor, equipment, agreement, etc.
- Total: dollar value of the resource.
- Agency: agency expending the resource.
- Fund: source of the resource.
- Description: text narrative of the activities and basis for the estimate.