

Draft CVPIA Fiscal Year 2013 Annual Work Plan

July 30, 2012

Program Title:

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

Responsible Entities:

| Staff Name | Agency | Role |
|-------------------------|--------------|----------------|
| <i>Elizabeth Kiteck</i> | <i>USBR</i> | <i>Lead</i> |
| <i>Roger Guinee</i> | <i>USFWS</i> | <i>Co-Lead</i> |

Program Goals and Objectives for FY 2013

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.
 - 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 Operations 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 its 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 1,900,000 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 works 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. FY2013 Proposed Activities and Costs

CVPIA Section 3406 (b)(9)/(b)(19), Flow Fluctuation Study/Reservoir Storage

| | 3406 (b)(9)/(b)(19) Requested Funding for Fiscal Year 2013 | | | | |
|----------------------|--|-----------------------------|------------|---------------|-------------------|
| | Restoration Fund | Water and Related Resources | State Cash | State In-Kind | Total All Sources |
| Total Funding | \$50,000 | \$0 | \$0 | \$0 | \$50,000 |
| Reclamation | \$50,000 | \$0 | | | \$50,000 |
| Service | \$0 | \$0 | | | \$0 |
| CA DFG | | | \$0 | \$0 | \$0 |
| CA DWR | | | \$0 | \$0 | \$0 |

| 1.1 Program Management | | | | | | | | | | | |
|-------------------------|---|---|--------|----------------|--------------------------|------------------------------|--|------------------------------------|-------------------|----------------------|--------------------------|
| AWP Activity Number | Activity Name | Activity Description | Agency | | Program Performance Goal | FY2013 Projected Performance | 3406 (b)(9)/(b)(19) Requested Funding for Fiscal Year 2013 | | | | |
| | | | Name | Fractional FTE | | | Restoration Fund | Water and Related Resources | State Cash | State In-Kind | Total All Sources |
| 1.1.1 | Interagency Collaboration, Sacramento River | Hold monthly Sacramento River Temperature Task Group meetings. Participants are from various agencies (Reclamation, DWR, FWS, NMFS, DFG). Topics discussed include updates on fishery related information (location of redds, fish counts etc.), upcoming operational changes, operational forecasts and how they may affect fishery actions. Purpose is to keep meeting participants informed and to discuss upcoming operations. (CA - H37 0214 2005) | BOR | 0.05 | | | \$12,550 | | | | \$12,550 |
| 1.1.2 | Interagency Collaboration, Stanislaus River | Hold monthly Stanislaus River Operations Group meetings. Participants are from various agencies (Reclamation, DWR, FWS, NMFS, DFG). Topics discussed include updates on fishery related information (location of redds, fish counts etc.), upcoming operational changes, operational forecasts and how they may affect fishery actions. Purpose is to keep meeting participants informed and to discuss upcoming operations. (CA - H37 0214 2005) | BOR | 0.05 | | | \$12,550 | | | | \$12,550 |
| | | | | | | | Sub-Total for Program Management, FY2013 | | | | |
| | | | | | | | Restoration Fund | Water and Related Resources | State Cash | State In-Kind | Total All Sources |
| Subtotal Funding | | | | | | | \$25,100 | \$0 | \$0 | \$0 | \$25,100 |
| Reclamation | | | | | | | \$25,100 | \$0 | | | \$25,100 |
| Service | | | | | | | \$0 | \$0 | | | \$0 |
| CA DFG | | | | | | | | | \$0 | \$0 | \$0 |
| CA DWR | | | | | | | | | \$0 | \$0 | \$0 |

| 3.2 | | Water Operations | | | | | | | | | | |
|---------------------|---------------------------------|---|--------|----------------|---|------------------------------|--|------------------------------------|-------------------|----------------------|--------------------------|---------|
| AWP Activity Number | Activity | Activity Name & Description | Agency | | Program Performance Goal | FY2013 Projected Performance | 3406 (b)(9)/(b)(19) Requested Funding for Fiscal Year 2013 | | | | | |
| | | | Name | Fractional FTE | | | Restoration Fund | Water and Related Resources | State Cash | State In-Kind | Total All Sources | |
| 3.2.1 | BOR Forecast, Trinity Reservoir | Trinity reservoir storage target. CVO works through a 12-month "forecast" of operations with the goal of achieving, when possible, the Shasta and Trinity storage targets. It is impossible to anticipate the 2013 performance at this time without knowing how the hydrology will shape up for this water year. (CA - H37 0214 2005) | BOR | 0.02 | Maintain min. storage of 600 TAF in Trinity Reservoir | unable to determine | \$4,410 | | | | | \$4,410 |
| 3.2.2 | BOR Forecast, Shasta Reservoir | Shasta reservoir storage target. CVO works through a 12-month "forecast" of operations with the goal of achieving, when possible, the Shasta and Trinity storage targets. It is impossible to anticipate the 2013 performance at this time without knowing how the hydrology will shape up for this water year.(CA - H37 0214 2005) | BOR | 0.02 | Maintain min. storage of 1.9 TAF in Shasta Reservoir | unable to determine | \$4,410 | | | | | \$4,410 |
| | | | | | | | Sub-Total for Water Operations, FY2013 | | | | | |
| | | | | | | | Restoration Fund | Water and Related Resources | State Cash | State In-Kind | Total All Sources | |
| | | | | | | | <i>Subtotal Funding</i> | \$8,820 | \$0 | \$0 | \$0 | \$8,820 |
| | | | | | | | <i>Reclamation Service</i> | \$8,820 | \$0 | | | \$8,820 |
| | | | | | | | <i>CA DFG</i> | | | \$0 | \$0 | \$0 |
| | | | | | | | <i>CA DWR</i> | | | \$0 | \$0 | \$0 |

| 4.1 | | Monitoring (Programmatic) | | | | | | | | | |
|---------------------|-------------------------------------|---|--------|----------------|--------------------------|------------------------------|--|------------------------------------|-------------------|----------------------|--------------------------|
| AWP Activity Number | Activity | Activity Name & Description | Agency | | Program Performance Goal | FY2013 Projected Performance | 3406 (b)(9)/(b)(19) Requested Funding for Fiscal Year 2013 | | | | |
| | | | Name | Fractional FTE | | | Restoration Fund | Water and Related Resources | State Cash | State In-Kind | Total All Sources |
| 4.1.1 | Survey and rescue, American River | Fish survey and rescue operations on American River. Targeted fish are salmon and steelhead. Stranding may occur when flows have been high and then are reduced, leaving some fish isolated in pools or in channels that have been cut off from the main river flow. The methods used are described in the narrative b(9)/b(19) AWP.(CA - H37 0214 2005) | BOR | 0.04 | n/a | n/a | \$8,040 | | | | \$8,040 |
| 4.1.2 | Survey and rescue, Stanislaus River | Fish survey and rescue operations on Stanislaus River. Targeted fish are salmon and steelhead. Stranding may occur when flows have been high and then are reduced, leaving some fish isolated in pools or in channels that have been cut off from the main river flow. The methods used are described in the narrative b(9)/b(19) AWP. (CA - H37 0214 2005) | BOR | 0.04 | n/a | n/a | \$8,040 | | | | \$8,040 |
| | | | | | | | Sub-Total for Monitoring (Programmatic), FY2013 | | | | |
| | | | | | | | Restoration Fund | Water and Related Resources | State Cash | State In-Kind | Total All Sources |
| | | | | | | | \$16,080 | \$0 | \$0 | \$0 | \$16,080 |
| | | | | | | | Subtotal Funding | | | | |
| | | | | | | | <i>Reclamation</i> | \$16,080 | \$0 | | \$16,080 |
| | | | | | | | <i>Service</i> | \$0 | \$0 | | \$0 |
| | | | | | | | <i>CA DFG</i> | | | \$0 | \$0 |
| | | | | | | | <i>CA DWR</i> | | | \$0 | \$0 |

Table 2 – Intentionally left blank

| 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 activity number: | 4.1.1 and 4.1.2 |
| Scope of the monitoring effort: | Varies depending on actual operations in 2013 – 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 |
| 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. |