

October 17, 2005
Work plan for Fiscal Year 2006

- I. Water Acquisition Program - CVPIA Sections 3406(b)(3), (d)(2) and (g)
- II. Responsible Entities

	Agency	Staff Name	Role
Lead	USBR	Dan Meier	Program Manager
Co-Lead	USFWS	Dick Jewell	Coordinator

III. Program Objectives for FY 2006

The major Water Acquisition Program (WAP) objectives are:

- (A) To provide supplemental water supplies for refuges, referred to as Incremental Level 4, for critical wetland habitat supporting resident and migratory waterfowl, threatened and endangered species, and wetland dependent aquatic biota [CVPIA Sections 3406(b)(3) and (d)(2)].
- (B) To acquire and manage instream flows in support of the Vernalis Adaptive Management Plan (VAMP) and the San Joaquin River Agreement (SJRA) [CVPIA Sections 3406 (g) and 3406(b)(3)].
- (C) To acquire water to improve spawning and rearing habitat and increase migration flows for fall-, winter- and spring-run Chinook Salmon and steelhead, in support of the Anadromous Fish Restoration Plan [CVPIA Section 3406(b)(3)] and in coordination with the CALFED Environmental Water Program and Environmental Water Account

IV. Status of the Program

In FY05, the Water Acquisition Program (WAP) continued efforts to:

- (A). Provide supplemental refuge water supplies (Incremental Level 4) through purchases from willing sellers.

The WAP acquires Incremental Level 4 supplies from willing sellers. This typically consists of annual purchases from a variety of water districts that historically have included the San Joaquin River Exchange Contractors and Central Valley Project, Cross Valley Canal and State Water Project contractors.

As a supplement to annual acquisitions, the WAP is looking at the potential for using groundwater in order to lower costs and increase reliability of providing

supplemental refuge water supplies. In 2004, initial groundwater investigations were completed by the WAP to identify groundwater data needs for the Central Valley Refuges that receive Incremental Level 4 water supplies. In 2005, the Water Acquisition Program initiated follow-up groundwater studies at Pixley NWR, East Bear NWR and Los Banos WA to determine the potential for sustained use of groundwater resources on these refuges. In 2006, the WAP will consider implementation of one or more pilot groundwater projects involving collection of welling pumping and water quality data that will allow assessment for the potential for long-term groundwater projects while providing short-term Incremental Level 4 supplies.

The WAP has also been involved in development of a “Refuge Water Quality Best Management Practices (BMP) Plan”. These Refuge Water Quality BMPs are being developed consistent with the requirement in recent CALFED legislation (H.R. 2828) to reduce the water quality impacts of the discharges of managed wetlands into the San Joaquin River. A draft report is currently being developed with a final report anticipated by the end of calendar year 2005.

The refuges have documented biological benefits associated with implementation of CVPIA. Prior to CVPIA, refuge management priority was fall flood-up and maintenance of adequate pond levels throughout the winter. Since 1992, supplemental refuge water supplies acquired by the Water Acquisition Program have provided a more consistent, reliable year round water supply to certain Central Valley refuges. Some of the benefits with implementation of CVPIA include:

- Increased frequency and acreage of irrigated moist soil food plants. The result has been a doubling in desirable plant biomass, which equates to more high-quality, high energy food available to waterfowl.
- Improved maintenance water flows through refuge ponds to improve water quality and reduce avian disease.
- Increased critical deepwater habitat within existing riparian zones. An example of biological benefits is establishment of a great blue heron rookery at Kern NWR in 1998. By 2001 there were 53 nests counted, inhabited by numerous nesting herons, egrets, cormorants and night-herons.
- Increased spring and summer habitat to benefit water dependent wildlife such as the giant garter snake. An example of habitat improvements occurred within Grassland Resource Conservation District (GRCD) consisting of 14,000 acres of additional spring habitat between 1991 and 2003 and 2,400 acres of additional summer habitat between 1991 to 1998.

- Increased critical spring and summer breeding habitat for the white-faced ibis which is a “species of special concern”. At Sutter NWR the population of this species has increased from 50 in 1992 to over 15,000 in 2004, and at Kern NWR the population increased from 50 in 1992 to over 8,000 in 2005.
- Increased early fall habitat for over-wintering migrants. Between GRCD, Kern NWR and Pixley NWR, there has been an increase in overall early fall habitat of 2,300 acres in 2003 for the benefit of the northern pintail and other early migrants which arrive in August to over-winter.

The WAP will continue to work with the refuges in assessing the biological benefits associated with the provision of supplemental water supplies under CVPIA.

(B). Provide additional instream flows in support of SJRA and VAMP. The Water Acquisition Program has acquired water from the San Joaquin River Group Authority (SJRGGA) and its member agencies to provide additional spring and fall fishery flows on the Stanislaus, Tuolumne, Merced, and lower San Joaquin rivers. This water is acquired in support of the San Joaquin River Agreement (SJRA) and the Vernalis Adaptive Management Plan (VAMP), which is a scientifically based fishery management plan to determine the relationships between flows, exports, and other factors on fish survival in the Sacramento-San Joaquin Delta. The increased flows benefit numerous resident and anadromous fish species but are acquired primarily to benefit Chinook salmon. Central Valley Chinook salmon constitute the majority of salmon produced in California, and at times have accounted for 70% or more of the statewide commercial harvest.

The SJRA and VAMP will continue as an on-going requirement until at least 2009. An “Annual Technical Report” is issued by the SJRGGA that consists of the consolidated annual SJRA Operations Report and VAMP Monitoring Report. This report includes a series of conclusions regarding biological benefits and program objectives, and recommended modifications to the VAMP experimental program implementation.

- (C) Acquire water to improve spawning and rearing habitat in increase salmon and steelhead in support of the Anadromous Fish Restoration Plan.

The Anadromous Fisheries Restoration Program (AFRP) has identified the need to augment stream flows on some tributaries to the Sacramento and San Joaquin Rivers to help meet a doubling goal of Central Valley anadromous fish identified in Section 3406 (b)(1) of CVPIA. In recent years, the U. S. Fish and Wildlife Service (USFWS) has led a planning effort to determine which tributaries should receive priority for instream acquisition efforts.

A key product of this effort is a “Decision Support Model” (DSM) which is expected to be completed in calendar year 2005. The DSM evaluates key factors including potential biological benefits, availability of water rights, cost of water, and potential impacts, in order to assess water acquisition priorities. A monitoring component will be built into future instream acquisitions to assure flow requirements are met and biological benefits are quantified. A specific timeline for implementation of instream acquisitions in support of AFRP will be established as part of future activities.

Also, the USFWS has taken the lead in development of “Guidelines for Appraisal of Water Rights in California”. There is currently a general lack of guidelines for water right appraisals. These guidelines will be useful in obtaining objective and defensible valuation of water rights acquired to augment instream flows. Draft guidelines are being issued in October 2005 for public review, with a final report due out around January 2006.

V. FY 2005 Accomplishments

Program Objectives	Delivery Period	Contractor	Quantity (AF)	Cost	Unit Cost per AF	Purpose
A – Incremental Level 4 Water	Jul 05 - Feb 06	Banta Carbona Irrigation District	4,000	\$520,000	\$130	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Jun 05 – Feb 06	Byron Bethany Irrigation District	5,700	\$798,000	\$140	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Jul 05 – Feb 06	Del Puerto Water District	10,000	\$1,200,000	\$120	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Jun 05 – Feb 06	Fresno Slough Water District	700	\$98,000	\$140	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Aug 05 – Feb 06	Kern-Tulare Water District	20,000	\$2,800,000	\$140	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Jul 05 – Feb 06	Lower Tule River Irrigation District	5,000	\$650,000	\$130	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Jun 05 – Feb 06	Patterson Irrigation District	2,075	\$269,750	\$130	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Jul 05 – Feb 06	Pixley Irrigation District	5,000	\$650,000	\$130	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Jul 05 – Dec 05	San Joaquin River Exchange Contractors	7,800	\$936,000	\$120	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Jun 05 – Feb 06	San Benito County Water District	1,200	\$168,000	\$140	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Aug 05 – Feb 06	Santa Clara Valley Water District	10,000	\$1,500,000	\$150	Contract yr 2005 Level 4 Refuge Water
A – Incremental Level 4 Water	Jul 05 – Feb 06	Tranquillity Irrigation District	1,549	\$216,860	\$140	Contract yr 2005 Level 4 Refuge Water
B – VAMP/SJRA	Oct 04	San Joaquin River Group Authority/Merced ID	12,500	\$822,125 (FY04 Funds)	\$66	Fall attraction flows and habitat improvement in Merced and lower SJR
B – VAMP/SJRA	May - Jun 05	San Joaquin River Group Authority	up to 110,000	\$4,529,484 (Partially paid with FY04 Funds)	N/A	VAMP 31-day pulse flow at Vernalis in April-May
B – VAMP/SJRA	Apr – Aug 05	San Joaquin River Group Authority/Oakdale ID	26,000	\$1,560,000	\$60	Stanislaus River flows; lower SJR flows; water quality; any authorized

						New Melones purpose
B – VAMP/SJRA	May – Jun 05	San Joaquin River Group Authority	N/A	\$290,290	N/A	VAMP Monitoring

VI. FY 2006 Tasks, Costs, Schedules and Deliverables

A. Narrative explanations of Tasks

1. Program Management. This is based on 1.9 FTE positions for Reclamation and 1.25 FTE positions for the USFWS. **Estimated Annual Cost** = \$496,992
2. Level 4 Refuge Water for FY06 (1st Quarter). No additional acquisitions of Incremental Level 4 water will be necessary during the 1st quarter of FY06; all water delivered during this period has been purchased with FY05 funds.
3. Merced I.D. SJRA Fall Flows (1st Quarter). This payment is for approximately 12,500 AF of instream flow in the Merced River in the fall months of 2005, under the SJRA. **Estimated Cost** = \$842,678 (Paid with FY05 funds.)
4. VAMP Spring Flows (2nd Quarter). San Joaquin River Group Authority delivers up to 110,000 AF for VAMP. Total payment obligation is approximately \$4,712,000. Federal share is approximately \$3,380,000. (Paid with FY05 funds.) State Cost Share is \$1,332,000.
5. San Joaquin River Agreement/Oakdale ID Flows (2nd Quarter). Oakdale Irrigation District (OID) delivers up to 15,000 AF at \$60 per AF under the terms of the SJRA. This water may be used for any authorized purposes of the CVP on the Stanislaus and San Joaquin Rivers. **Estimated Cost** = \$900,000. (FY05 funds of \$521,322 and FY06 funds of \$378,678.)
6. San Joaquin River Agreement - Additional Flows from OID. OID may provide up to 11,000 AF at \$60 per AF under terms of the SJRA. This water represents the unused portion of OID's commitment of up to 11,000 AF for the spring pulse flow provided under VAMP. **Estimated Cost** = \$660,000
7. VAMP Double-Step Flows (2nd Quarter). Funds for this purpose are needed only if: 1) the current water year is classified as a double-step year based on the criteria given in VAMP, and 2) if meeting the VAMP flow objective requires more than 110,000 acre feet of supplemental water. If these flows are not required, all or part of these funds may become available for other CVPIA Program needs. **Estimated Cost** = \$2,820,00
8. VAMP Environmental Monitoring (2nd Quarter). This represents estimated VAMP monitoring costs. **Estimated Cost** = \$300,000 (Paid with FY05 funds.)
9. Planning. Long term planning work for Level 4 and instream flow acquisitions will continue. This may include work involving groundwater investigations, refuge water quality BMPs, and instream acquisition priorities and procedures. There may be a need for additional technical and/or consulting support for Program staff. **Estimated Cost** = \$450,000
10. Level 4 Refuge Water Supplies (2nd, 3rd and 4th quarters). The need for Incremental Level 4 refuge water supplies for Contract Year 2006 (March 2006 through February 2007) is approximately 115,000 AF based on existing needs, conveyance capability, and ability to beneficially use supplemental water on the refuges. At an estimated cost of \$150 per AF, the acquisition cost of 115,000 AF is \$17,250,000. Based on the estimate of available funds remaining in the Fiscal Year 2006 budget after Tasks 1 through 9 are taken care of first due to prior commitments, there will be enough money to purchase approximately 77,202 AF of Incremental Level 4 refuge water. Additional funds may become available in

Fiscal Year 2006 for purchases of Level 4 water from reallocated double-step funds (Task 7), and other de-obligated or realigned funds from the FY06 budget. **Estimated Cost** = \$17,250,000. **Available Funds** = \$11,580,330. **Unfunded Need** = \$5,669,670.

Note: Tasks 3, 4, 5 and 6 represent commitments made by the United States as signatory to the San Joaquin River Agreement (SJRA) which is implemented pursuant to State Water Resources Control Board Decision 1641. Tasks 6 and 7 are mutually exclusive program elements of SJRA/VAMP. If double-step flows (Task 7) are required, then OID's difference water (Task 6) is zero. Double-Step years are defined in the San Joaquin River Agreement as a function of the current and previous water year's hydrologic classification. This has a potentially significant impact on the amount of funding available for Level 4 acquisitions.

11. Potential Instream Flows Acquisitions. In order to meet CVPIA and anadromous Fish Restoration Program (AFRP) goals and objectives, there is a need to increase stream flows through acquisitions (by purchase, lease, or exchange) of available water rights. **Estimated Cost** = \$1,000,000. **Available Funds** = \$0. **Unfunded Need** = \$1,000,000.

Summary of Part VI:

Total Costs for Tasks 1 through 11 Proposed for FY06 Funding: **\$23,055,670

Total Proposed Budget Funding for FY06: \$16,386,000

Total Additional Funding Needed: \$6,669,670

**The "Total Cost" amount includes VAMP double-step and the OID difference water. Both of these costs will not be incurred in the same year. If 2006 is not a double-step year and those funds are made available to WAP, the funding shortfall would be reduced by \$2,820,000. The state cost share on VAMP is generally made available to WAP early in the fiscal year which will further reduce the funding shortfall by \$1,332,000.

B. Schedule and Deliverables

#	Task	Dates		Deliverable
		Start	Complete	
3	Merced I.D. SJRA Fall Flows	Oct 05	Oct 05	Up to 12,500 AF per SJRA
4	VAMP Spring Pulse Flows	Apr 06	May 06	Up to 110,000 AF per SJRA/VAMP
5	OID additional water	Apr 06	Sep 06	Up to 15,000 AF - typically fall fish flow water provided at New Melones Reservoir to be used for habitat improvement in Stanislaus and lower San Joaquin rivers
6	OID difference water from VAMP 2005 (per SJRA)	Jul 06	Sep 06	Up to 11,000 AF after VAMP flows
7	VAMP Double-Step Flows	Apr 06	May 06	Up to 47,000 AF per SJRA
8	VAMP Environmental Monitoring	Apr 06	May 06	Report
9	Planning	Oct 05	Sep 06	Long term plan
10	Level 4 Refuge Water Contract Year 2006	Mar 06	Sep 06	Agreements for up to 77,702 AF
11	Instream Flow Acquisitions	Jan 06	Sep 06	Agreements for instream flows

Schedule and Deliverables - Additional Funding Needs

#	Task	Dates		Deliverable
		Start	Complete	
10	Level 4 Refuge Water	Mar 06	Sep 06	Agreements for up to 37,298 AF
11	Instream Flow Acquisitions	Jan 06	Sep 06	Agreements for up to 10 cfs instream flows

C. Summary of Program Costs and Funding Sources.

#	Task	Total Cost	Funding Sources	
			RF	Prop 204
1	Program Management	\$496,992	\$496,992	
3	Merced I.D. SJRA Fall Flows	\$842,678	\$842,678 ¹	
4	VAMP Spring Pulse Flows	\$4,712,000	\$3,380,000 ¹	\$1,332,000
5	OID SJRA Flows	\$900,000	\$900,000 ²	
6	Additional OID SJRA Flows	\$660,000	\$660,000	
7	VAMP Double-Step	\$2,820,000	\$2,820,000	
8	VAMP Environmental Monitoring	\$300,000	\$300,000 ¹	
9	Planning	\$450,000	\$450,000	
10	Level 4 Refuge Water	\$11,580,330	\$11,580,330	
11	Instream Flow Acquisitions	\$0	\$0	
	Total	\$22,762,000	\$21,430,000	\$1,332,000
	Total FY 05 Funds	\$5,044,000	\$5,044,000	0
	Total FY 06 Funds	\$17,718,000	\$16,386,000	\$1,332,000

¹FY05 funds

²FY05 funds of \$521,322 will be used

D. CVPI A Program Budget

#	Task	FTE	Direct Salary and Benefits Costs	Contract Costs	Misc. Costs	Indirect Costs	Total Costs
1,2,3,5,6,9,10	Program Task (BOR)	1.86	\$158,851	\$13,019,008 ¹	2,530	\$92,542	\$13,272,931
4,7,8	VAMP			\$0 ²			\$0
	Monitoring	.04	\$3,752	\$0 ³	0	\$2,214	\$5,966
	Double-Step			\$2,820,000			\$2,820,000
1,3,5,6,9,10,11	Program Task (USFWS)	1.25	\$189,682	\$50,000	\$0	\$47,421	\$287,103
	Total by Category	3.15	\$352,285	\$15,889,008	\$2,530	\$142,177	\$16,386,000 ⁴

¹Does not include the FY05 funds of \$1,364,000

²Does not include the FY05 funds of \$3,380,000 and the State Cost Share of \$1,332,000

³Does not include the FY05 funds of \$300,000

⁴The \$16,386,000 total is from the president's budget and includes the following
 Section 3406(b)(3) Instream (Other) - \$2,000,000 and VAMP Doublestep \$2,800,000
 Section 3406(2) Level 4 Water Purchases - \$7,952,000
 Section 3406(g) VAMP - \$3,634,000

VII. Future Years Commitments/Actions

SJRA/VAMP is an annual commitment through December 31, 2009 to compensate members of the San Joaquin River Group Authority for the provision of up to 110,000 af of water to meet the VAMP flow requirements, plus up to 47,000 af in “double step” years, plus additional flows provided by Merced and Oakdale ID’s. Total cost in 2005 dollars was \$7,201,899 indexed through the end of the agreement.

Incremental Level 4 Refuge Water supply needs will increase incrementally in the future from the 2005 level of approximately 115,000 AF to approximately 125,000 AF in 2010 as refuge conveyance systems are constructed or upgraded to allow full CVPIA mandated Level 4 water supply requirements to be beneficially used on the refuges. Also, the price of water is expected to increase incrementally consistent with historic trends.

There will be an increasing need to acquire water by purchase of water rights or long-term leases, to increase instream flows to benefit fish and wildlife consistent with the goals and objectives of CVPIA and the Anadromous Fisheries Restoration Program. The acquisition of water will be coordinated with the CALFED Environmental Water Program, which has similar program objectives.

Table E. DRAFT CVPIA 5-Year Budget Plan FY 2007 – 2010
(\$ Thousands)

Program Description and Section		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	Total (\$)
	W&RR	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$15,000
	RF	\$16,386	\$25,275	\$26,749	\$26,927	\$28,415	\$123,752
	State	\$1,332	\$1,332	\$1,332	\$1,332	\$1,332	\$6,660
	Other (identify)						
Total:		\$20,718	\$29,607	\$31,081	\$31,259	\$32,747	\$145,412

Activities by Fund:

W&RR funds are to acquire additional instream flows in support of Section 3406(b)(3) and to acquire Incremental Level 4 refuge water supplies.

RF funds are to acquire Incremental Level 4 refuge water supplies and to support VAMP/SJRA. VAMP/SJRA terminates in 2009 however the agreement may be extended or revised.

State funds are provided for VAMP through 2008 however there is the expectation that the State will continue to cost share.

Notes:WRR – Water and Related Resources Appropriations

RF – Restoration Fund (Section 3407)

State – State of California cost share funding

FY 2007 – 2010 These figures could significantly change in the Congressional Appropriations process. WRR Appropriations are displayed as amounts that might be reasonably appropriated each year. . The annual RF budgets were estimates taking into account the three-year rolling average. All of these estimates will be adjusted annually as RF collections are realized.