

## **BUREAU OF RECLAMATION**

### **ECOSYSTEM RESTORATION PROGRAM**

#### **Anadromous Fish Restoration Program**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3406 (b)(1)

**FY 2007 Budget Request (000's):** \$4,200

#### ***Estimated Inter-agency Breakdown:***

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | 4,150          |
| U.S. Fish and Wildlife Service | 50             |

**Project Description:** The objectives of the Anadromous Fish Restoration Program (AFRP) are to (1) improve habitat for all life stages of anadromous fish through provision of flows of suitable quality, quantity, and timing, and physical habitat; (2) improve survival rates by reducing or eliminating entrainment of juveniles at diversions; (3) improve the opportunity for adult fish to reach their spawning habitats in a timely manner; (4) collect fish population, health, and habitat data to facilitate evaluation of restoration actions; (5) integrate habitat restoration efforts with harvest and hatchery management; and (6) involve partners in the implementation and evaluation of restoration actions.

**Current Status:** On the mainstem Sacramento River watershed, a study of production consequences of sex reversal in Central Valley Chinook Salmon was continued to understand the decline in Central Valley anadromous salmon populations. On Mill Creek, a hydroacoustic study to obtain better adult salmon escapement estimates is underway and will be completed in 2006. On Antelope Creek, a new fish ladder is under construction. On Deer Creek, construction is underway below Stanford Vina Dam to raise the pool water elevation to enhance salmon and steelhead access to the fish ladder. On Big Chico Creek, the AFRP is conducting an engineering evaluation of the Iron Canyon Fish Ladder construction site prior to committing funds to the larger cost associated with construction of a permanent fish ladder. On the Lower Butte Creek Project, the status of the three project phases are: Phase I (Existing Conditions) is 100% complete; Phase II (Engineering Design/Environmental Docs/Permits) is 80% complete; and Phase III (Construction) is 60% complete. On the Yuba River, repairs were made to the Yuba Goldfields "leaky dike" adult salmon and steelhead exclusion barrier which was damaged due to high flows. In addition, preliminary results of a river analysis and sediment transport study have resulted in a very high correlation between modeled good spawning habitat and actual salmon redd locations. On the Cosumnes River, final fixes were made to all of the major salmon and steelhead passage barriers. AFRP efforts to find a water supply to wet the Cosumnes River channel prior to fall storms to allow on-time migration of fall-run Chinook salmon to spawning grounds resulted in application of previously banked 3406(b)(2) water in fall 2005. Ongoing negotiations with Sacramento

County are targeting potential acquisition of 5000 af of mitigation water to be released during fall periods in the upper Cosumnes River, in perpetuity. On the Mokelumne River, approximately 2,300 additional tons of spawning gravel was added. On the Stanislaus River, the first year of egg survival studies to evaluate gravel augmentation projects showed up to 80% survival. The AFRP is completing the final year of testing a portable Alaskan weir to standardize and enhance accuracy of anadromous salmonid adult escapement measurements to enable more accurate monitoring to support AFRP's salmon production doubling goals. On the Tuolumne River, monitoring at the 7/11 mining reach salmon habitat restoration project indicate that the number of Chinook salmon redds nearly doubled immediately following construction in fall 2003. On the Merced River, Chinook salmon spawner use on the Robinson Reach was restored to pre-1997 flood damage levels immediately following construction.

**Anadromous Fish Screen Program (AFSP)**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3406 (b)(21)

**FY 2007 Budget Request (000's):** \$3,000

***Estimated Inter-agency Breakdown:***

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | 2,429          |
| U.S. Fish and Wildlife Service | 571            |

**Project Description:** The primary objective of the Anadromous Fish Screen Program (AFSP) is to protect juvenile chinook salmon (all runs), steelhead trout, green and white sturgeon, striped bass and American shad from entrainment at priority diversions throughout the Central Valley. Section 3406(b)(21) of the Central Valley Project Improvement Act (CVPIA) requires the Secretary of the Interior to assist the State of California in developing and implementing measures to avoid losses of juvenile anadromous fish resulting from unscreened or inadequately screened diversions on the Sacramento and San Joaquin Rivers, their tributaries, the Delta, and the Suisun Marsh. Additionally, all AFSP projects meet Goal 3 of the CALFED Ecosystem Restoration Program's (ERP) Draft Stage 1 Implementation Plan (8/1/01, Page 22) which states that, "the goal is to maintain and/or enhance populations of selected species for sustainable commercial and recreational harvest, consistent with the other ERP Strategic Goals."

**Current Status:** Prior year AFSP funding (FY99 through FY05) has contributed to the completion of engineering feasibility studies and/or reconnaissance studies, the initiation of environmental documentation, and/or the initiation of final designs for the Natomas Mutual Water Company (NMWC), Sutter Mutual Water Company (SMWC), RD108, Meridian Farms Water Company (MFWC) and Patterson Irrigation District (PID).

Construction of the fish screen at the SMWC Tisdale Pumping Plant was initiated in summer 2005. This diversion at 960 cfs is the largest unscreened diversion on the

Sacramento River. This fish screen project, when completed in 2007, will protect outmigrating spring, fall, and winter-run Chinook salmon, Central Valley steelhead, and Sacramento splittail, as well as resident game and non-game fish from entrainment.

In 2006 a retrievable fish screen system is expected to be installed on a forty-two inch intake siphon that is owned by Reclamation District 307 and operated by Reclamation District 999. The project is located on the right bank of the Sacramento River approximately 0.75 miles upstream of the town of Clarksburg, CA.

In 2006, construction of the Reclamation District No. 108 (RD108) "Combined Pumping Plant and Fish Screen Project" (Project) is expected to be initiated. This project involves combining three of RD 108's largest existing unscreened pumping plants on the Sacramento River into one new 300 cfs pumping plant with a positive barrier fish screen. Construction of the project facilities are scheduled to be completed during 2008.

FY 2007 funds are anticipated to be used for cost share funding for construction for the NMWC and/or MFWC and PID fish screen projects.

### **Clear Creek Restoration**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3406 (b)(12)

**FY 2007 Budget Request (000's):** \$935

#### ***Estimated Inter-agency Breakdown:***

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | 535            |
| U.S. Fish and Wildlife Service | 400            |

**Project Description:** The purpose of the Clear Creek Restoration Program is to (1) restore stream channel form and function necessary to optimize habitat for salmon and steelhead and the aquatic and terrestrial communities on which they depend; (2) determine long-term flow needs for spawning, incubation and rearing by conducting and Instream Flow Incremental Methodology (IFIM) study as mandated in Section 3406 (b)(12); (3) provide flows of adequate quality and quantity to meet the requirements of all life stages of Chinook salmon and steelhead trout known to use Clear Creek; (4) provide spawning gravel to replace supply blocked by Whiskeytown Dam; and (5) monitor project results.

**Current Status:** Actions to be implemented for FY 2007 include the following: 1) continue monitoring the program, documenting and quantifying juvenile production of steelhead and spring-run Chinook salmon; 2) increase the quality and quantity of spawning habitat by placing clean spawning-sized gravel at several locations along the creek. New injection sites will be developed downstream of Whiskeytown Dam in accordance with the OCAP Biological Opinion; 3) conduct analyses to determine the need to implement Phase 3C of the Channel Restoration Project; 4) conduct analyses to

determine need and feasibility of increasing juvenile rearing habitat from Clear Creek Road Bridge downstream to the upstream extent of the Channel Restoration Project; 5) continue work on developing accurate and predictive Whiskeytown Lake/Clear Creek temperature models as required by the OCAP Biological Opinion.

**Comprehensive Assessment and Monitoring Program**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3406 (b)(16)

**FY 2007 Budget Request (000's):** \$400

**Estimated Inter-agency Breakdown:**

| Agency                         | \$000's |
|--------------------------------|---------|
| U.S. Bureau of Reclamation     | 25      |
| U.S. Fish and Wildlife Service | 375     |

**Project Description:** The Comprehensive Assessment and Monitoring Program (CAMP) is intended as the vehicle for comprehensively assessing the effects of all CVPIA restoration actions under Section 3406(b). The program has two objectives: (1) assess the overall (cumulative) effectiveness of actions implemented under CVPIA Section 3406(b), and (2) assess the relative effectiveness of categories of actions under CVPIA Section 3406(b). This will be primarily a data compilation and assessment effort, using ongoing project-specific and general monitoring to assess the progress of 3406 (b) actions.

**Current Status:** Updated production estimates for adult Central Valley Chinook salmon covering the years 1952 through 2003. Completed a third year of visual observation monitoring of American River Chinook salmon and steelhead to provide timely information on the effects of Folsom Dam operations, and to provide a baseline for future restoration monitoring. In FY 2006, selected sites along the lower American River will continue to be monitored. Additional restoration results will be monitored where opportunity arises.

**Dedicated Project Yield**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3406 (b)(2)

**FY 2007 Budget Request (000's):** \$900

**Estimated Inter-agency Breakdown:**

| Agency                         | \$000's |
|--------------------------------|---------|
| U.S. Bureau of Reclamation     | 200     |
| U.S. Fish and Wildlife Service | 700     |

**Project Description:** The Department of the Interior has the responsibility to dedicate and manage annually 800,000 acre-feet of Central Valley Project (CVP) water (b)(2) water) for fish, wildlife, and habitat restoration purposes. The management of (b)(2) water will be closely coordinated with the management of CALFED's Environmental

Water Account (EWA). The program objectives are to (1) improve habitat conditions for anadromous fish in CVP-controlled rivers and streams and the Bay-Delta to help meet the AFRP doubling goals, (2) increase survival of out migrant juvenile anadromous fish, especially in the Bay-Delta, (3) enhance recovery of listed threatened and endangered fish species, and (4) monitor and evaluate to assess the effectiveness of (b)(2) measures.

**Current Status:** The CALFED Programmatic Record of Decision (ROD), signed on August 28, 2000, established the EWA program to protect (supplemental to a baseline level of protection) the fish of the Bay-Delta estuary. The management of the (b)(2) water was closely coordinated with the management of the EWA. The updated Operating Criteria and Procedures (OCAP) reflects the AFRP flow objectives and the revised decision on implementation of the dedicated water and the EWA. Upstream actions and several Bay-Delta actions were implemented and these contributed to the Central Valley Improvement Act's (CVPIA) goal of doubling natural production of anadromous fish and providing concurrent benefits to other fish and wildlife, including endangered species. Continued the monitoring and evaluation to assess the effectiveness of (b)(2) environmental measures.

**Other CVP Impacts – Habitat Restoration Program (3406 (b)(1) Other**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3406 (b)(1)

**FY 2007 Budget Request (000's):** \$1,500

**Estimated Inter-agency Breakdown:**

| Agency                         | \$000's |
|--------------------------------|---------|
| U.S. Bureau of Reclamation     | 750     |
| U.S. Fish and Wildlife Service | 750     |

**Project Description:** Protect and restore native habitats impacted by the CVP that are not specifically addressed in the Fish and Wildlife Restoration Activities section of the CVPIA. The focus is on habitats known to have experienced the greatest percentage decline in habitat quantity and quality since construction of the CVP, where such decline could be attributed to the CVP (based on direct and indirect loss of habitat from CVP facilities and use of CVP water). These habitats include serpentine soils, alkali desert scrub and associated grasslands, vernal pools, foothill chaparral, riparian and associated oak woodlands.

**Current Status:** In FY 2007, funding will be used for acquisition of fee title, conservation easements, restoration, and management of habitats as well as surveys and studies for listed, proposed, or candidate species to facilitate better management decisions for acquisition, restoration, and management. The projects will focus on restoring serpentine habitats, alkali scrub, vernal pool habitat, chaparral, riparian upland habitat and associated oak woodlands throughout the Central Valley.

In 2005, nine activities were funded with CVPIA restoration funds for a cost of \$1,671,000. These activities included fee title acquisition of sensitive vernal pool habitats in Butte county, research on endangered serpentine soil plants in Santa Clara County, surveys for giant garter snake at Colusa NWR, study of state-wide vernal pool plant associations, California red-legged frog surveys in Placer and El Dorado counties, restoration planning at Merced NWR, vernal pool restoration at Sacramento NWR, adaptive management and restoration at the Herbert Preserve in Tulare County, and restoration/easement planning on the Dos Rios Ranch in Stanislaus County.

Program Priorities for 2006 are: (1) serpentine soil and associated habitats supporting endemic species, such as the bay checkerspot butterfly, in Santa Clara County; (2) grassland, alkali sink, and alkali scrub habitat located in the Central Valley, with emphasis on the Tulare Basin, and on habitat linkages for San Joaquin kit fox, blunt-nosed leopard lizard, Tipton kangaroo rat, Buena Vista lake shrew and others dependent upon this habitat complex; (3) vernal pool habitats throughout the Central Valley supporting federal vernal pool invertebrates, California tiger salamander, and plant species such as slender orcutt grass; (4) gabbro soils chaparral habitat in El Dorado County, supporting federally listed plant species, with special emphasis in the southern region of the Pine Hills Preserve; (5) habitat protection and management in Contra Costa County for listed species found in priority habitats; (6) riparian upland habitat mosaic, including oak woodlands, throughout the southern Central Valley.

### **Spawning Gravel/Riparian Habitat**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3406 (b)(13)

**FY 2007 Budget Request (000's):** \$500

#### ***Estimated Inter-agency Breakdown:***

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | 470            |
| U.S. Fish and Wildlife Service | 30             |

**Project Description:** The purpose of the Spawning Gravel/Riparian Habitat Program is to increase the availability of spawning gravel and rearing habitat, and subsequently monitor the results of these actions, for: (1) Sacramento River Basin Chinook salmon and steelhead trout in the reach of the mainstem Upper Sacramento River from Keswick Dam downriver to Red Bluff Diversion Dam; (2) American River Basin Chinook salmon and steelhead trout in the reach of the American River downriver from Nimbus Dam; and (3) Stanislaus River Chinook salmon and steelhead trout in the reach of the Stanislaus River downriver from Goodwin Dam.

**Current Status:** Upper Sacramento River. Since 1997, the gravel placement program in CVPIA, Section 3406(b)(13), has implemented actions that have resulted in the placement of almost 166,000 tons of salmonid spawning gravel in these rivers to increase the availability of spawning and rearing habitat for Chinook salmon and steelhead. In

addition, existing gravel substrates on the American River have been ripped and manipulated to make them more usable for these purposes.

Nearly 152,000 tons of salmonid spawning gravel has been placed in the Upper Sacramento River since 1997. A total of 32,500 tons of gravel has been placed at a site on the right bank of the mainstem Sacramento River immediately downriver from Keswick Dam in five years - 1997, 1998, 2000, 2004, and 2005; 96,300 tons at a site on the right bank immediately downstream from the confluence with Salt Creek in seven years - 1997, 1998, 1999, 2002, 2003, 2004, and 2005; and 23,000 tons on the left bank on the Tobiasson property toward the southern extent of the Redding city limits in 2000. These introductions have occurred in anticipation that subsequent high river flows will disperse the gravel downriver. In every case the gravel has been dispersed.

In 2005, delivered salmonid spawning gravel to two river bank sites on the Upper Sacramento River and let river flow subsequently disperse the material downriver. A total of 8,500 tons of spawning gravel was placed - 4,250 tons at the Keswick Dam site and 4,250 tons at the Salt Creek site. The program entered into a contract to evaluate the benefits of gravel placement in the Upper Sacramento River which includes an examination of the geomorphic environmental baseline.

American River. The substrate at three riffles on the lower American River was manipulated and 6,000 tons of salmonid spawning gravel was subsequently placed at these sites in 1999 according to specifications.

In 2005, continued the monitoring program on the lower American River, documenting the use by salmon, the location of spawning redds, and the quality of treated versus untreated salmon spawning areas. The spawning gravel monitoring program covered two items. 1) Aerial photos documented Chinook spawning locations and redd densities relative to gravel placement sites on three dates throughout the spawning period. 2) Spawning gravel condition monitoring assessed the suitability of spawning gravels in the gravel addition sites and in other high use spawning areas compared to low use and unused habitats.

Stanislaus River. A total of 8,000 tons of salmonid spawning gravel has been placed in the Stanislaus River since 1997 at several sites immediately downriver from Goodwin Dam. On two occasions, helicopters were used to deposit the gravel directly into the channel. Gravel has also been delivered by truck to areas adjacent to the channel, and then pushed into the river channel. Gravel was deposited to the river channel in 2004 by means of a sluice delivery system. The introduced gravel is subsequently dispersed downriver by streamflow.

In 2005, 2,500 tons of spawning gravel was placed at two sites in Goodwin Canyon on the Stanislaus River - 1,500 tons at an in-channel stockpile location for flows to distribute the gravel downstream through time and the remaining 1,000 tons at an experimental site. An adaptive management experiment is being conducted at the experimental site to determine gravel size criteria that will provide the best survival for incubating eggs. A peak count of 65 Chinook redds occurred on the site where gravel was placed in 2004 and a peak of 84 redds was counted at the 2002 placement sites. Redds were also mapped on

these two sites. Underwater observations verified that fry emergence occurred from the placed gravels and rearing densities were high. Post-project stream bed topography was mapped at the 2004 placement location and pre-project topography was mapped at the 2005 placement sites.

### **Suisun Marsh Preservation**

**Authority:** P.L. 99-546, 100 Stat. 3052, October 27, 1986

**FY 2007 Budget Request (000's):** \$2,521

**Project Description:** The Suisun Marsh Preservation Agreement (SMPA) was executed on March 2, 1987, among the Bureau of Reclamation, California Department of Water Resources, California Department of Fish and Game, and Suisun Resource Conservation District. The objective of the SMPA is to assure that a dependable water supply is maintained to mitigate the adverse effects on the marsh from the CVP and SWP and a portion of the adverse effects of the other upstream diversions. Reclamation (CVP) is responsible for 40 percent of the construction and annual operation and maintenance costs associated with implementation of the SMPA; the State of California is responsible for 60 percent of the implementation costs.

**Current Status:** Funding continues Federal participation with the State of California to identify structural and non-structural actions for protection and preservation of Suisun Marsh to improve water quality, while preserving the storage yield of the CVP. Funding continues Reclamation participation with California Department of Water Resources to ensure dependable water supply of adequate quantity and quality to protect wildlife habitat in the Marsh for the protection and preservation of fish and wildlife.

### **Water Acquisition**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3406 (b)(3)-(d)(2)

**FY 2007 Budget Request (000's):** \$8,086

#### **Estimated Inter-agency Breakdown:**

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | 7,886          |
| U.S. Fish and Wildlife Service | 200            |

**Project Description:** Three key objectives of the Water Acquisition Program (WAP) 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 instream flows in support of the San Joaquin River Agreement (SJRA) [CVPIA Section 3406(b)(3)]. The increased flows benefit numerous resident and anadromous fish species but are acquired primarily to benefit Chinook salmon. (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 (AFRP) [CVPIA Section 3406(b)(3)] and in coordination with the CALFED Environmental Water Program and Environmental Water Account.

**Current Status:** The WAP continues its efforts to:

- (a) provide supplemental refuge water supplies (Incremental Level 4) through annual purchases. 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 2006 and 2007 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.
- (b) provide additional instream flows in support of SJRA. The WAP acquires water for the SJRA from the San Joaquin River Group Authority and its member agencies to provide additional spring and fall fishery flows on the Stanislaus, Tuolumne, Merced, and lower San Joaquin rivers. The SJRA will continue as an on-going requirement until at least 2009.
- (c) acquire water to improve spawning and rearing habitat in increase salmon and steelhead in support of the AFRP. In recent years, the U. S. Fish and Wildlife Service has led a planning effort to determine which tributaries should receive priority for instream acquisition efforts. A specific timeline for implementation of instream acquisitions in support of AFRP will be established as part of future program activities in 2006 and 2007.

**Ecosystem Restoration Projects, TBD**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575

**FY 2007 Budget Request (000's):** \$1,980

**Project Description:** Continues the implementation of projects that improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta system to support sustainable populations of diverse and valuable plant and animal species. Projects include habitat restoration actions, fish screen improvements, control of invasive species, and water quality improvement projects that contribute to the objectives of CALFED's Ecosystem Restoration Program.

**Current Status:** Presently, federal and state CALFED agencies are developing an action plan for implementation of the CALFED program over the course of the next ten years. Because this effort is re-evaluating the priorities of the Program, the specific ecosystem projects that will require additional funding are uncertain at this time. Allocation of FY 2007 funds will be determined through continued coordination with the CALED Ecosystem Restoration Program (ERP) implementing agencies and subsequent to sufficient development of the ERP priorities by the appropriate ERP management

agencies. A report describing these projects, consistent with section 103 (d)(6)(D) of P.L. 108-361, will be sent to Congress at least 45 days prior to approving projects using these funds.

## **ENVIRONMENTAL WATER ACCOUNT**

### **Environmental Water Account**

**Authority:** P.L. 108-361 §103(f)(2)

**FY 2007 Budget Request (000's):** \$10,900

**Project Description:** The Environmental Water Account (EWA) is a cooperative management program whose purpose is to provide protection to at-risk fish species of the Bay-Delta Estuary through environmentally beneficial changes in the operations of the State Water Project (SWP) and the CVP, at no uncompensated water cost to the projects' water users. Three federal (Reclamation, U.S. Fish and Wildlife Service, National Marine Fisheries Service) and two state (California Departments of Water Resources and Fish and Game) agencies, work together implementing the EWA.

**Current Status:** The five EWA agencies have provided a commitment through 2007 that there will be no reductions in contract water deliveries to CVP/SWP export project contractors south of the Delta beyond existing regulatory levels resulting from measures to protect at-risk fish under Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA). This commitment, or assurance, is based on: 1) continuing availability of the regulatory baseline, as defined in the CALFED Record of Decision; 2) the availability of sufficient EWA assets to replace contract water deliveries affected by operational changes made to protect at-risk fish species; and 3) actions taken under CALFED's Ecosystem Restoration Program.

The EWA is currently being implemented in accordance with the Flexible Purchase Alternative described in the Final EWA Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) (January 2004) for the "short-term" program. A Record of Decision was signed by Reclamation in March 2004. Also in March 2004, a Notice of Determination was approved by the California Department of Water Resources and filed with the California State Clearinghouse. This EIS/EIR complies with the National Environmental Policy Act and California Environmental Quality Act and provides environmental coverage for the program through 2007.

Starting in September 2004, the EWA agencies embarked on the preparation of an EIS/EIR for the proposed long-term EWA program. This effort will provide the environmental analysis and documentation for the EWA beyond 2007, until 2030. Public scoping for the EIS/EIR was conducted in March 2005. A draft document is anticipated to be released for public review in fall 2006 and the final EIS/EIR is presently scheduled for completion in fall 2007.

## **WATER USE EFFICIENCY**

### **Calleguas Municipal Water District Recycling Project**

**Authority:** P.L. 102-575 - Title XVI, Reclamation Wastewater and Groundwater Study and Facilities Act, October 30, 1992; and P.L. 104-266, Reclamation Recycling and Water Conservation Act of 1996, October 9, 1996.

**FY 2007 Budget Request (000's):** \$990

**Project Description:** This project consists of planning, designing, and constructing regional water recycling projects that include wastewater reclamation and reuse, brackish groundwater recovery, and regional salinity management projects. A total of ten specific projects are planned resulting in annual recycling or recovery of a total of 51,470 acre-feet of water in order to reduce the region's dependence on imported water supplies. This project is located in Ventura County, California.

**Current Status:** For FY 2007, work will continue on the Regional Brine Line being constructed by the Calleguas MWD. As of September 30, 2005, this project had used 33 percent of its authorization ceiling. The project is scheduled for completion in 2010.

### **Long Beach Area Water Reclamation Project**

**Authority:** P.L. 102-575 - Title XVI, Reclamation Wastewater and Groundwater Study and Facilities Act, October 30, 1992; and P.L. 104-266, Reclamation Recycling and Water Conservation Act of 1996, October 9, 1996.

**FY 2007 Budget Request (000's):** \$743

**Project Description:** This project is located in Los Angeles County, California and consists of two units: The Alamitos Barrier Reclaimed Water Project will ultimately recycle about 8,000 acre-feet per year in lieu of imported water. Facilities will be constructed so that tertiary treated water from the existing Long Beach Water Reclamation Plant can be treated to advanced levels so that it can be used for groundwater injection into seawater intrusion barriers. Phase 1 was completed in 2005, and Phase 2 is scheduled to begin construction in 2009.

The City of Long Beach Recycled Water System Expansion Project will construct an expansion of an existing distribution system that allows the use of recycled water throughout the city. The expansion consists of pumps, pipes, storage facilities, and control systems that would increase use of recycled water from 4,585 acre-feet per year to 16,677 acre-feet per year (including the Alamitos Barrier project).

**Current Status:** For FY 2007, work will continue on the expansion of the City of Long Beach's recycled water distribution system, including the construction of pipelines, pumping facilities, and storage facilities. As of September 30, 2005, the project has

utilized 49% of its authorization ceiling. Alamitos Barrier Reclaimed Water Project is scheduled for completion in 2011. City of Long Beach Recycled Water System Expansion Project is scheduled for completion in 2009.

**North San Diego County Area Water Recycling Project**

**Authority:** P.L. 102-575 - Title XVI, Reclamation Wastewater and Groundwater Study and Facilities Act, October 30, 1992; and P.L. 104-266, Reclamation Recycling and Water Conservation Act, October 9, 1996.

**FY 2007 Budget Request (000's):** \$1,237

**Project Description:** This project is located in San Diego County, California. The four components of this project are the result of a cooperative effort by the San Elijo Joint Powers Authority, the Carlsbad Municipal Water District, the Olivenhain Municipal Water District, and the Leucadia Wastewater District. This project consists of planning, designing, and constructing permanent facilities to reclaim and reuse approximately 15,350 acre-feet of water annually in the North San Diego County area in order to reduce the region's dependence on imported water supplies and reduce wastewater discharges to the ocean.

**Current Status:** Work for FY 2007 will continue on construction of the City of Carlsbad's recycled water system, including the recycled water treatment plant, pumping facilities, pipelines, and storage facilities. Work will also continue on the Northwest Quadrant recycled water facilities by the Olivenhain MWD, consisting primarily of pipelines. As of September 30, 2005, the project has utilized 76% of its authorization ceiling. The project is scheduled for completion in 2008.

**Orange County Regional Water Reclamation Project, Phase 1**

**Authority:** P.L. 102-575 - Title XVI, Reclamation Wastewater and Groundwater Study and Facilities Act, October 30, 1992; and P.L. 104-266, Reclamation Recycling and Water Conservation Act of 1996, October 9, 1996.

**FY 2007 Budget Request (000's):** \$1,237

**Project Description:** This project will take tertiary treated reclaimed water from an existing facility operated by the Orange County Sanitation District, treat the water to advanced levels using a pretreatment and reverse osmosis process, and pump the water through a pipeline that parallels the Santa Ana River up to existing recharge facilities adjacent to the River, where the water will be used to recharge the region's groundwater basin. This initial phase will provide about 50,000 acre-feet of water annually for groundwater recharge.

**Current Status:** Work for FY 2007 will continue on the construction of the Groundwater Replenishment System, including the recycled water treatment plant, pumping facilities,

and pipelines. As of September 30, 2005, the project has used 70 percent of its authorization ceiling. The project is scheduled for completion in 2008.

### **San Diego Area Water Reclamation Program**

**Authority:** P.L. 102-575 - Title XVI, Reclamation Wastewater and Groundwater Study and Facilities Act, October 30, 1992; and P.L. 104-266, Reclamation Recycling and Water Conservation Act, October 9, 1996.

**FY 2007 Budget Request (000's):** \$3,465

**Project Description:** Greater use of reclaimed water results in decreased dependency on potable imported water including water from the Colorado River. This project consists of four units:

**The San Diego Water Reclamation Project** is a regional water reclamation program being implemented by the cities of San Diego and Poway, Sweetwater Authority, and Otay Water District. The project provides for the construction of five new wastewater treatment plants, expansion of an existing plant, along with distribution systems, and two conjunctive use projects. Total system capacity upon completion will be approximately 57,116 acre-feet per year. **The Escondido Water Reclamation Project** is being implemented by the city of Escondido to upgrade its Hale Avenue Resource Recovery Facility from secondary treatment to tertiary treatment. A distribution system that will put the recycled water to beneficial use for non-potable purposes is also being constructed. In addition, the city of San Diego is planning to upgrade and expand its San Pasqual Water Reclamation Plant, which will produce recycled water for non-potable uses, and for a possible conjunctive use project. A distribution system will also be constructed. The city of Poway will construct a distribution system that will utilize recycled water from the San Pasqual plant. When completed, the three project components will deliver a total of approximately 11,200 acre-feet of recycled water annually. **The San Diego Water Repurification Project** has been stopped by the city of San Diego, and the reclaimed water and funds that would have been used for this project are now included in the San Diego Water Reclamation Project. **The Padre Dam Municipal Water District Reclamation Project** will upgrade and expand an existing water treatment plant and construct a distribution system that will deliver 2,000 acre-feet of recycled water annually.

**Current Status:** Work for FY 2007 will continue on the construction of recycled water distribution systems (pipelines, pumping facilities, and storage facilities) from the City of San Diego's North City WRP and South Bay WRP. Work will also continue on recycled water systems being constructed by the Otay Water District and the Sweetwater Authority. As of September 30, 2005, this project has utilized 44 percent of its authorization ceiling. The project is scheduled for completion in 2012.

### **San Gabriel Basin Project**

**Authority:** P.L. 102-575 - Title XVI, Reclamation Wastewater and Groundwater Study and Facilities Act, October 30, 1992; P.L. 103-126, Water and Energy Appropriations Act for 1994, October 28, 1993; P.L. 104-266, Reclamation Recycling and Water Conservation Act, October 9, 1996; and P.L. 108-418, To amend the Reclamation Projects Authorization and Adjustment Act of 1992 to increase the Federal share of the costs of the San Gabriel Basin demonstration project, November 30, 2004.

**FY 2007 Budget Request (000's):** \$742

**Project Description:** This project is located in the San Gabriel Valley of Los Angeles County, California and consists of three units:

- **The San Gabriel Basin Demonstration Project** is a conjunctive use project that was originally envisioned to address the most severe area of groundwater contamination within the San Gabriel Basin, namely the Baldwin Park Operable Unit, which is an Environmental Protection Agency Superfund site. However, after additional investigations, it was apparent that a comprehensive solution to the water supply and groundwater contamination problems was required to adequately protect the groundwater resources of the San Gabriel Basin. Additional operable units within the San Gabriel Basin, known as the El Monte, South El Monte, and Puente Valley Operable Units were included in the project to provide such a comprehensive remedy. The revised project continues to meet the original objectives by implementing conjunctive use projects that will enhance both the groundwater quality and the local and regional water supply. Treatment projects will remove volatile organic compounds and other contaminants from the groundwater, and then deliver the water for distribution. Extraction, treatment, and distribution of San Gabriel Basin groundwater will improve the basin's groundwater quality, increase storage capacity, and expand the basin's use for regional benefits.
- **The Rio Hondo Water Recycling Program** will distribute 10,000 acre-feet of recycled water annually from the San Jose Creek Water Reclamation Plant for landscape irrigation and industrial process water. This use of recycled water will replace the need for a like amount of potable water, thereby lessening the demand on both imported and groundwater resources. By reducing the need for groundwater pumping, this program will assist in the prevention of further migration of contamination from the San Gabriel plume, and wastewater discharges to the ocean will be decreased. Components of the program are construction of a main pump station, a booster pump station, reservoir storage facilities (10 million gallons), and approximately 40 miles of pipeline.
- **The San Gabriel Valley Water Reclamation Program** will utilize up to 10,000 acre-feet of reclaimed water annually from the San Jose Creek Water Reclamation Plant to recharge the San Gabriel groundwater basin in order to replace and/or

supplement water currently being imported and recharged. There will be no net change in the amount of water currently being recharged as a result of implementation of this program. The recharge will be accomplished in the San Gabriel River channel downstream of Santa Fe Dam. Additional facilities to allow reclaimed water to be used for landscape irrigation and industrial use are also included.

**Current Status:** Work for FY 2007 will continue on the construction of facilities to contain and treat the contaminated groundwater in the San Gabriel Basin. Work will also continue on the San Gabriel Valley Water Reclamation Project by the Upper San Gabriel Valley MWD, consisting of pipelines, pumping facilities, and storage facilities. As of September 30, 2005, this project has used 68 percent of its authorization ceiling. The project is scheduled for completion in 2010.

### **San Jose Area Water Reclamation and Reuse Program**

**Authority:** P.L. 102-575, Title XVI, Section 1607, as amended, The Reclamation Wastewater and Groundwater Study and Facilities of 1992; P.L. 104-266, Reclamation Recycling and Water Conservation Act, October 9, 1996.

**FY 2007 Budget Request (000's):** \$495

**Project Description:** This program calls for the planning, design, and construction of demonstration and permanent facilities, in cooperation with the City of San Jose and the Santa Clara Valley Water District, to reclaim and reuse up to 36,000 acre-feet per year of wastewater treatment plant effluent in the San Jose metropolitan service area. The total program includes construction of 300 miles of pipe over a 150 square mile area in six cities providing reclaimed water to the San Jose metropolitan service area. The total program cost is estimated at \$480 million, with the Federal contribution capped at \$109.9 million.

**Current Status:** FY 2007 funding will reimburse the City of San Jose for the Federal share of project construction of Phase I. The project is being constructed in phases. Phase I construction was completed in 1998, providing 9,000 acre-feet of recycled water. For Phase I, Reclamation is reimbursing the City of San Jose by providing up to 25 percent or up to \$35 million. Reclamation has spent \$26.7 million through FY2005. Phase I reimbursement is scheduled for completion in FY 2009. Reclamation's position has been to complete Phase I reimbursement before committing to Phase II or other project phases.

The City is proceeding into Phase II which will provide an additional 27,000 acre-feet of recycled water. Phase II construction is estimated at \$180 million and Reclamation's participation could reach \$45 million. Additional phases beyond Phase II are possible. Reclamation's maximum Federal cost share for all phases is capped at \$109.9 million.

### **Water Conservation**

**Authority:** Public Law 97-293, Public Law 102-575 (Section 3405(e) of the CVPIA) The authority that is used to enter into cooperative agreements with irrigation and water districts, and states (Section 206 of the Consolidated Appropriations Act of 2005, Public Law 108-447), is a one-year authority and expires September 30, 2006. The Administration will be seeking additional authority as necessary.

**FY 2007 Budget Request (000's):** \$2,755

**Project Description:** The Central Valley Project (CVP) Water Conservation Program (Program) activity is administered by the Regional Water Conservation Team (Team), with assistance from the Area Offices. The Program Team performs duties required under the Central Valley Project Improvement Act of 1992 (CVPIA) and the Reclamation Reform Act of 1982 (RRA), which includes the development and administration of various Criteria – the Standard Criteria for Evaluating Water Management Plans, the Regional Criteria for the Sacramento Valley, and the Criteria for Developing Refuge Water Management Plans. Section 3405(e) of the CVPIA, Public Law 102-575, directs the Secretary of the Interior (Secretary) to establish and administer an office on Central Valley water conservation best management practices that shall “. . . develop criteria for evaluating the adequacy of all water conservation plans developed by project contractors, including those plans required by Section 210 of the RRA, Public Law 97-293.”

**Current Status:** The Program Team continues to provide Federal leadership and expertise required to evaluate Plans and provides technical and financial assistance to water districts in the preparation of these Plans. Through these efforts Reclamation is maintaining an active water conservation program for its Contractors and the public. Program staff works closely with other federal, state, local, and environmental constituents on water conservation issues and policy development. The WaterShare website has undergone some changes in order to conform to Reclamation's "Visual Identify" program. The Conservation Connection Newsletter is still used to inform the public on Mid-Pacific Region water conservation activities.

### **Water Conservation Projects**

**Authority:** Public Law 97-293, Public Law 102-575 (Section 3405(e) of the CVPIA)

**FY 2007 Budget Request (000's):** \$250

**Project Description:** FY 2007 activities will be to continue implementation of projects anticipated to be awarded in FY06 through a Request for Proposal (RFP) Program through grants or cooperative agreements, which would be targeted to meet the water conservation objectives contained in the CALFED Water Use Efficiency program, including implementation of Best Management Practices, while focusing on water districts with a federal nexus. The RFP would be designed to encourage cost shared projects proposed by water districts, irrigation districts, resource conservation districts,

urban water agencies, etc., located in the CALFED solution area. Grants and cooperative agreements will be awarded based on criteria consistent with the goals of Reclamation's Water Conservation Field Services Program.

**Current Status:** RFP process will be completed and projects are anticipated to be awarded by September 2006.

## **DRINKING WATER QUALITY**

### **Drainage Management Program**

**Authority:** P.L. 86-488

**FY 2007 Budget Request (000's):** \$1,980

#### ***Estimated Inter-agency Breakdown:***

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | \$1,755        |
| U.S. Fish and Wildlife Service | \$225          |

**Project Description:** A Record of Decision on Reclamation's efforts to develop a solution to address outstanding Federal drainage obligations under the 1960 San Luis Act, including efforts outlined in the Plan of Action for Drainage to the San Luis Unit submitted to the District Court in April 2001, in compliance with the Court's order, will be completed in 2006. The FY07 budget request continues Reclamation's participation in the ongoing Grasslands Bypass Project. The Grassland Bypass Project results in annual reductions in discharge of salts, selenium, and other constituents to the San Joaquin River.

**Current Status:** A Final EIS is being prepared and a Record of Decision will be completed by July 2006.

#### ***Key Milestones:***

- Complete Final EIS and ROD July 2006

### **Land Retirement**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3408 (h)

**FY 2007 Budget Request (000's):** \$1,500

#### ***Estimated Inter-agency Breakdown:***

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | 1,260          |
| U.S. Fish and Wildlife Service | 240            |

**Project Description:** The purpose of the Land Retirement Program is to evaluate impacts of retiring 15,000 acres of land from irrigated agriculture. Interior will continue to purchase land from willing sellers as part of a Demonstration Project up to the targeted 15,000 acres and remove it from irrigated agriculture. Pursuant to the FWS September 1999 Biological Opinion for the Demonstration Project, five years of monitoring are necessary to evaluate the potential risks to biota and the physical impacts of land retirement. A report for documenting five years of monitoring at the demonstration site in Fresno County (1999-2004) was completed in FY 2005 and posted on Reclamations website. Two more years of monitoring at the Atwell Island Water District site in Tulare and Kings Counties are needed to comply with the FWS Biological Opinion. Monitoring of selenium levels in vegetation and wildlife will continue.

**Current Status:** In FY 2007, funds will be used to acquire and retire lands from irrigated agricultural production, due to poor drainage conditions. Actions in FY 2007 will continue land acquisition, research, ecological restoration, site management, reporting, and outreach at the two demonstration project sites.

#### **San Joaquin Basin Action Plan**

**Authority:** Title XXXIV, H.R. 429, P.L. 102-575, Section 3406 (d)(5)

**FY 2007 Budget Request (000's):** \$1,709

#### **Estimated Inter-agency Breakdown:**

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | \$1,679        |
| U.S. Fish and Wildlife Service | 30             |

**Project Description:** Reclamation and the Service are to complete the design for the East Bear Creek Unit facilities of the San Luis National Wildlife Refuge, Los Banos, California. Planning for this Unit has proceeded separately from other San Joaquin Basin Action Plan lands due to its location on the east side of the San Joaquin River. This refuge is projected to be a 4,000 acre site that will have emergent and riparian wetlands and wetland associated upland areas. The Service has obtained previous funding under the North American Wetlands (NAW) Conservation Act, which has funded the program to restore and enhance the East Bear Creek Unit to a more natural environment. Under the San Joaquin Basin Action Plan and the mandate of CVPIA, Reclamation is responsible for the planning, design, and construction of the water conveyance infrastructure of the East Bear Creek Unit facility.

**Current Status:** In FY 2007, funds will be used to complete construction for phase one of the East Bear Creek Unit facilities and complete design for phase two.

### **San Joaquin River Salinity Management**

**Authority:** P.L. 86-488, P.L. 108-361

**FY 2007 Budget Request (000's):** \$3,000

**Project Description:** This Program was mandated in Section 103(d)(2)(D) of the Water Supply, Reliability, and Environmental Improvement Act (Act; Public Law 108-361). The authorization directs the Secretary of the Interior, in consultation with the Governor of California, to develop and initiate implementation of a program to meet all existing water quality standards and objectives for which CVP has responsibility prior to increasing export limits from the Sacramento-San Joaquin Delta (Delta) for the purposes of conveying water to CVP contractors south of the Delta or increasing deliveries through an intertie between the California Aqueduct and Delta Mendota Canal (DMC). The Act further clarifies that this authority and direction is to provide greater flexibility in meeting the existing water quality standards and objectives for which the CVP has responsibility and reduce the demand on water from New Melones Reservoir used for that purpose, and to assist the Secretary of the Interior in meeting any obligations to CVP contractors from the New Melones Project, i.e., Stockton East Water District (SEWD) and South San Joaquin Water Conservation District (SSJWCD). Reclamation has initiated implementation of the program required by the Act and is coordinating implementation with the San Joaquin River Water Quality Management Group, which includes the California Department of Water Resources along with other state and local agencies and other key stakeholders in the San Joaquin Valley.

**Current Status:** Funding in 2007 will continue implementation of activities that will help meet water quality standards and objectives for which the Central Valley Project has responsibility. Projects include those within the preferred alternative proposed by the San Joaquin River Water Quality Management Group, of which Reclamation is a participant. The approach focuses on managing salt loading in the San Joaquin River in areas where the highest salt loads originate. The approach also incorporates an element of real-time management, to manage salt loading into the San Joaquin River, while not redirecting impacts to the Delta. Specific activities include continued implementation of the Westside Regional Drainage Plan, water quality monitoring, wetlands management, and other actions identified in the program to meet water quality standards and objectives in the lower San Joaquin River.

## STORAGE

### **CVP, Yield Feasibility Investigation**

**Authority:** P.L. 102-575, Title XXXIV, Sec. 3408(j), Central Valley Project Improvement Act of 1992, October 30, 1992; and P.L. 108-361, Title I, Sec. 103(d)(1)(C), Calfed Bay-Delta Authorization Act.

**FY 2007 Budget Request (000's):** \$792

**Program Description:** The Least-Cost Central Valley Project Yield Increase Plan (Yield Increase Plan) submitted to Congress in July 1996 identified the least-cost options to replace the impact of dedicating 1.2 million acre-feet of yield for fish and wildlife purposes under the Central Valley Project Improvement Act (CVPIA) on the Central Valley Project (CVP) water service contractors. The water supply and demand reduction options identified in the Yield Increase Plan include land fallowing, conservation, modified operations, conjunctive use, water reuse, surface storage, conveyance, and other options. As directed in the Calfed Bay-Delta Authorization Act, a Water Supply and Yield Study (WSAYS), in cooperation with the State of California, is required for submission to Congress by October 2005.

**Current Status:** A supplemental report updating the impact analysis and identifying the types of actions needed to effectively restore the impact is underway. In addition, even though budget requests for FY2006 and FY2007 did not include specific funding needs for the WSAYS, Reclamation is initiating the WSAYS within existing appropriations. The CVP Yield Feasibility Investigation Program continues to monitor and participate in internal and external projects and programs that may further affect the yield of the CVP.

### **Los Vaqueros Expansion Study**

**Authority:** P.L. 108-7, §215, Title II, Division D, and P.L. 108-361, sec. 103

**FY 2007 Budget Request (000's):** \$1,980

#### **Estimated Inter-agency Breakdown:**

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | 1,780          |
| U.S. Fish and Wildlife Service | 200            |

**Project Description:** This study is evaluating the potential to expand the existing Los Vaqueros Reservoir by up to 400,000 acre-feet. The objectives of the study are to improve water supply reliability for Bay Area users, assess less costly measures to implement the Environmental Water Account which protects at-risk Delta fish species, and improve the quality of water delivered to Bay Area agencies from the Delta.

**Current Status:** FY 2007 funds will be used to support preparation of the Plan Formulation Report and Feasibility Report. Specific activities will include operational modeling, physical and operational impact analyses, developing mitigation measures,

preparing real estate costs, performing cost and benefit analyses, economic analysis, and public outreach.

Contra Costa Water District (CCWD) completed a Planning Report in May 2003 that focused on developing sufficient information for the CCWD Board and ratepayers on how an expanded reservoir could meet their Board principles which include improving water quality and supply reliability for the Bay Area, as well as enhancing the Delta. Reclamation published an Initial Alternatives Information Report in November 2005. CCWD is the lead agency for the California Environmental Quality Act compliance documents. Reclamation is the lead agency for the National Environmental Policy Act compliance documents. A Notice of Intent to prepare an Environmental Impact Statement was published in the Federal Register on December 20, 2005. Joint NEPA/CEQA scoping meetings were held in January 2006.

***Key Milestones:***

- Initial Alternatives Information Report: Summer 2005
- Plan Formulation Report: Summer 2006
- Draft Feasibility Study Report & EIS/R: Spring 2007
- Final Feasibility Study Report & EIS/R: Spring 2008

***Shasta Lake Water Resources Investigation***

***Authority:*** P.L. 96-375, 1980; P.L.108-361, Section 103

***FY 2007 Budget Request (000's):*** \$3,960

***Estimated Inter-agency Breakdown:***

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | 3,660          |
| U.S. Fish and Wildlife Service | 150            |
| U.S. Forest Service            | 150            |

***Project Description:*** Reclamation is conducting a feasibility study including preparation of a decision document and environmental impact statement for the Shasta Lake Water Resources Investigation (SLWRI). The purpose of the SLWRI is to develop an implementable plan primarily involving modifying Shasta Dam and Reservoir to promote increased survival of anadromous fish populations in the upper Sacramento River; promote increased water supply reliability to the Central Valley Project (CVP); and to the extent possible through meeting these objectives, include features to benefit other identified ecosystem, flood control, and related water resources needs.

***Current Status:*** FY 2007 funds will be used to support preparation of the draft Feasibility Report and EIS. Specific activities will include formulation of final array of alternatives including a tentatively preferred plan, refinement of operational modeling, physical and operational impact analyses, identifying mitigation requirements, preparing feasibility level engineering designs and cost estimates, which will include real estate

costs, performing cost and benefit analyses, identifying allocation of costs and benefits, and public outreach.

The Plan Formulation Report, anticipated to be completed in fall 2006, will identify preliminary environmental impacts and mitigation requirements, cost and benefit analysis, identification of a tentatively preferred plan, and preliminary allocation of costs and benefits.

An Initial Alternatives Information Report (IAIR), which was completed in June 2004, contains descriptions about water resources problems and needs in the upper Sacramento River and in the Central Valley Project and State Water Project study areas. Also included is information on study objectives, potential solutions, and recommended future actions. Five alternative plans were recommended for further investigation, all of which include raising Shasta Dam and Reservoir from between 6.5 to 18.5 feet primarily for increasing anadromous fish survival and water supply reliability, and potentially conjunctive use facilities, ecosystem restoration elements, and non-structural components focusing on increasing the efficiencies of the existing water supply and flood control operation of Shasta Reservoir. Each alternative would contribute directly and indirectly to the four CALFED objectives of water quality, water supply reliability, ecosystem restoration, and delta levee system integrity.

***Key Milestones:***

- Conduct scoping meetings and release Scoping Report: Fall 2005
- Plan Formulation Report: Fall 2006
- Draft Feasibility Study Report & EIS: Winter 2007
- Final Feasibility Study Report & EIS: Fall 2008

***Sites Reservoir***

***Authority:*** P.L. 108-137, Title II, Section 211, dated December 1, 2003; P.L.108-361, Section 103 (d)(1)(A)(ii).

***FY 2007 Budget Request (000's):*** \$1,485

***Project Description:*** The Feasibility Study is investigating up to 1.9 million acre-feet of offstream storage at the proposed Sites Reservoir and other locations in the Sacramento Valley. The proposed project would enhance water management flexibility, increase the reliability of supplies, reduce diversions on the Sacramento River during critical fish migration periods, and provide storage and operational benefits to other CALFED programs including Delta water quality and the Environmental Water Account.

***Current Status:*** FY 2007 funds will be used to support preparation of the Plan Formulation Report. Specific activities will include operational modeling, physical and operational impact analyses, developing mitigation measures, preparing real estate costs, performing cost and benefit analyses, economic analysis, and public outreach.

The California Department of Water Resources (DWR) is the lead agency and is currently completing an Initial Alternatives Information Report in support of the Federal planning process. The Initial Alternatives Information Report is scheduled for completion in spring 2006 and will identify a range of alternatives to be considered during the Plan Formulation Study. DWR is continuing to proceed with environmental studies completion of an EIS/EIR for a 1.8 million acre-foot Sites Reservoir. Reclamation developed a conceptual model that will evaluate temperature, water quality, sediment loads, channel geomorphology, groundwater soil moisture, and riparian vegetation establishment once the alternatives are formulated. In FY2007, Reclamation will complete the calibration of this conceptual model to evaluate impacts during the Plan Formulation Report and Feasibility Report phases.

***Key Milestones:***

- Initial Alternatives Memorandum: Spring 2006
- Plan Formulation Report: Summer 2007
- Draft Feasibility Report and Draft EIS/EIR: Summer 2008
- Final Feasibility Report and Final EIS/EIR: Summer 2009

**Upper San Joaquin River Basin Storage Investigation**

***Authority:*** P.L. 108-7, §215, Title II, Division D

***FY 2007 Budget Request (000's):*** \$3,960

***Estimated Inter-agency Breakdown:***

| <b>Agency</b>                  | <b>\$000's</b> |
|--------------------------------|----------------|
| U.S. Bureau of Reclamation     | <b>3,760</b>   |
| U.S. Fish and Wildlife Service | <b>200</b>     |

***Project Description:*** The Investigation is evaluating additional storage in the upper San Joaquin River watershed through enlargement of Millerton Lake at Friant Dam or a functionally equivalent storage program. The primary objectives for storage and management of water supply from the upper San Joaquin River are to contribute to restoration of and improve water quality for the San Joaquin River, facilitate conjunctive management and water exchange opportunities, and improve CVP water supply reliability. Secondary objectives/benefits include potential for increased management of flood flows at Friant dam, contributions to long term Environmental Water Account water supply, and hydropower generation and recreational opportunities.

***Current Status:*** FY 2007 funds will be used to advance several critical concurrent activities that are needed to support the Draft FR/EIS phase of the Investigation. Specific activities will include operational modeling, physical and operational impact analyses and applicable surveys, development of mitigation measures, preparing real estate costs, performing cost and benefit analyses, economic analysis, and public outreach.

An Initial Alternatives Information Report (IAIR) was completed June, 2005. The IAIR screened 24 water storage measures and resulted in six measures retained for further study. The IAIR also described preliminary water operations scenarios and the status of ground water storage measures development.

The Investigation team has begun development of the Plan Formulation Report (PFR), which will quantify the performance and benefits of the retained measures, formulate and compare alternatives, evaluate environmental impacts in greater depth and identify a Tentatively Preferred Plan (TPP). An economic feasible set of alternatives (approximately 2-3), which includes the TPP, is anticipated for evaluation in the Draft FR/EIS.

***Key Milestones:***

- Plan Formulation Report: July 2007
- Draft Feasibility Study Report & EIS/R: July 2008
- Final Feasibility Study Report & EIS/R: July 2009

**CONVEYANCE**

**Enlarged Delta Mendota Canal /California Aqueduct Intertie Feasibility Study**

**Authority:** P.L. 108-361 §103(f)(1)(B)

**FY 2007 Budget Request (000's):** \$1,288

**Project Description:** Evaluation of increased capacity of the intertie between the State Water Project California Aqueduct and the Central Valley Project Delta Mendota Canal.

**Current Status:** It is anticipated that by the end of 2006 construction of an intertie between the State Water Project California Aqueduct and the Central Valley Project Delta Mendota Canal will be complete. This project, with an initial capacity of 400 cfs toward the California Aqueduct and a reverse flow capability of 900 cfs toward the Delta-Mendota Canal, will allow for greater operation and maintenance flexibility for both the CVP and SWP, and enable the CVP to recover conveyance capacity. A feasibility study of increasing the conveyance capacity of the intertie will be initiated in 2006 and continue into 2007.

**Frank's Tract**

**Authority:** P.L. 108-361 §103(f)(1)(C)

**FY 2007 Budget Request (000's):** \$100

**Project Description:** Project objective is to significantly reduce salinity levels at the Delta drinking water intakes and improve water supply reliability by reconfiguring levees and/or Delta circulation patterns around Franks Tract. The Franks Tract project started as

an investigation into the ecosystem benefits of reclaiming this large flooded Delta island. Hydrodynamic studies indicated that actions taken at Franks Tract could potentially result in significant reductions of Delta salinity (and thus bromide) at Delta drinking water intakes.

**Current Status:** DWR is currently using monitoring results and advanced hydrodynamic models to determine if a pilot test at Franks Tract is feasible and if so, will begin the design phase of the pilot test by 2008 or 2009. Reclamation is initiating a federal feasibility in 2006 and will continue the study in 2007.

#### **Recirculation Feasibility Study**

**Authority:** P.L. 108-361 §103(f)(1)(G)

**FY 2007 Budget Request (000's):** \$1,385

**Project Description:** Study the recirculation of Delta export water to reduce salinity and improve dissolved oxygen in the San Joaquin River. This action may also reduce the reliance on the New Melones Reservoir for meeting water quality and fishery flow objectives in the San Joaquin River.

**Current Status:** Completed a Recirculation Pilot Study and submitted the Final Recirculation Pilot Study Report June 2005. A feasibility study is being initiated in 2006 and will continue into 2007.

#### **San Luis Lowpoint Feasibility Study**

**Authority:** P.L. 108-361 §103(f)(1)(A)

**FY 2007 Budget Request (000's):** \$1,485

**Project Description:** Study of potential actions to increase the operational flexibility of storage in San Luis Reservoir and ensure a high quality, reliable water supply for San Felipe Division contractors.

**Current Status:** Funding in 2007 would continue development of a feasibility report. A plan of study is under development and is expected to be published in early spring 2006. The feasibility study will be initiated immediately following the plan of study.

#### **Through Delta Facility Evaluation**

**Authority:** Reclamation Act of 1902

**FY 2007 Budget Request (000's):** \$395

**Project Description:** Evaluation of a 4,000 cfs diversion facility in the north Delta to assess its potential benefits and impacts on water quality, water supply and environmental conditions in the Delta. DWR is the lead agency for this project.

**Current Status:** Current analysis is focusing on the feasibility of Through-Delta Facility options, determining Through-Delta Facility benefits and impacts on water quality and fisheries, determining the effects of the Through-Delta Facility on other CALFED Program actions, and making recommendations on the project.

If it is determined that the Through-Delta Facility should be implemented, environmental documentation would be prepared, and preliminary design and environmental permitting for a proposed project would occur. Technical analysis and recommendations are expected to be completed by November 2008. If the project is supported and funding is available, the EIR/EIS will be initiated by 2011.

**Alternative Intake**

**Authority:** P.L. 108-361 §103(f)(1)(E)

**FY 2007 Budget Request (000's):** \$495

**Project Description:** The Calfed Bay-Delta Authorization Act authorizes Reclamation to relocate drinking water intake facilities to in-Delta water users or take other actions necessary to offset the degradation of drinking water quality in the Delta due to the South Delta Improvements Program (SDIP). Current analysis in the SDIP environmental documents show that relocating water intakes in the Delta is not required to mitigate water quality impacts of the program.

**Current Status:** In 2006, Reclamation is evaluating alternatives to mitigate for implementation of the SDIP in case current analysis proves to be inaccurate in the future subsequent to initiating the program and it is determined that further mitigation measures are required. A federal feasibility is being initiated in 2006 and will continue into 2007. Full implementation of SDIP is not scheduled to begin until 2009.

**South Delta Improvements Program**

**Authority:** P.L. 102-575, Title XXXIV, Sec. 3406(15), Central Valley Improvement Act of 1992, October 30, 1992; and P.L. 108-361, Title I, Sec. 103(e)(2)(A), Calfed Bay-Delta Authorization Act.

**FY2007 Budget Request (000's):** \$150

**Program Description:** Reclamation and DWR completed environmental studies for the South Delta Improvement Program (SDIP) to provide increased deliveries for the SWP and CVP water service contractors while addressing the Delta fisheries and local in-Delta agricultural water users needs. The SDIP is a component of the Conveyance Program of the Bay Delta Program. The SDIP major components are increasing the allowable

diversion capacity at the SWP's Clifton Court Forebay to 8,500 cfs; construction of permanent operable flow control barriers to improve water level and water quality available for agricultural diversions in the south Delta; dredging portions of Middle River, Old River, and West, Grantline, Victoria, and North Canals to improve flows in south Delta channels ; and constructing a permanent operable fish control barrier at the head of Old River to reduce fish movement into south Delta channels.

***Current Status:*** Significant activities conducted in 2005 included interagency coordination with the Fish and Wildlife Service and the National Marine Fisheries Service, and the California Department of Fish and Game under the Federal and State Endangered Species Acts. Completion of environmental documentation on the preferred physical/structural component is anticipated in the fall of 2006 with project implementation beginning in 2009/10. Funding in FY 2007 will support continued coordination and technical support to DWR.

**Tracy Pumping Plant Mitigation Program**

***Authority:*** P.L. 102-575, 3406 (b)(4)

***FY 2007 Budget Request (000's):*** \$1,914

***Project Description:*** Continues identifying and making physical improvements and operational changes assessing fishery conditions, and assessing salvage operations at the Tracy Fish Collecting Facility per CVPIA.

## SCIENCE

### **Interagency Ecological Program**

**Authority:** P.L. 102-575, Title XXXIV, Central Valley Project Improvement Act of 1992, October 30, 1992.

**FY 2007 Budget Request (000's):** \$3,762

**Project Description:** Continues to support the Interagency Ecological Program (IEP) for the Sacramento-San Joaquin estuary for physical, chemical, and biological monitoring which is required as a condition of the joint Federal-State water export permit and studies under the Endangered Species Act of 1973 and to resolve Bay-Delta water issues.

**Current Status:** The IEP provides a variety of essential data utilized for management and operation of the CVP and for planning future projects involving Reclamation. Currently the IEP has withdrawn from conducting special studies and limits its endeavors to monitoring various biological, water quality, and hydrological parameters.

### **CALFED Science Activities**

**Authority:** P.L. 102-575, Title XXXIV, Central Valley Project Improvement Act of 1992, October 30, 1992.

**FY 2007 Budget Request (000's):** \$2,970

**Project Description:** Continues investigation by the Interagency Ecological Program agencies and the CALFED Science Program of causes for the recent declines in the Delta of pelagic organisms. Also continues expert evaluations and scientific assessments of Program elements and for assisting the CALFED agencies with the establishment of performance measures, and monitoring and evaluating the performance of all Program elements.

## OVERSIGHT AND COORDINATION

### **CALFED Program Management, Oversight, and Coordination**

**Authority:** P.L. 108-361 §103(f)(4)

**FY 2007 Budget Request (000's):** \$2,970

**Project Description:** Activities include: (i) Program support; (ii) Program-wide tracking of schedules, finances, and performance; (iii) multiagency oversight and coordination of Program activities to ensure Program balance and integration; (iv) development of interagency cross-cut budgets and a comprehensive finance plan to allocate costs in accordance with the beneficiary pays provisions of the Record of Decision; (v) coordination of public outreach and involvement, including tribal, environmental justice, and public advisory activities in accordance with the Federal Advisory Committee Act (5 U.S.C. App.); (vi) development of Annual Reports; and (vii) Reclamation's administration of the storage, conveyance, water use efficiency, environmental water account, ecosystem restoration, science, and water transfer programs.

## **ARMY CORPS OF ENGINEERS**

### **ECOSYSTEM RESTORATION PROGRAM**

#### **Hamilton Airfield Wetlands Restoration, CA**

**Authority:** WRDA of 1999, Sec 101(b)(3)

**FY 2007 Budget Request (000's):** \$11,700

**Project Description:** The project includes 988 acres of a former military airfield and adjacent California State Lands Commission areas. The site is located on San Pablo Bay, 4 miles east of the city of Novato, in Marin County, California. The levee-protected site has subsided below the elevation of surrounding properties, including the tidal wetlands immediately adjacent to San Pablo Bay. This wetlands restoration project would advance the beneficial reuse of dredged material from San Francisco Bay as part of the Long Term Management Strategy (LTMS). The California State Coastal Conservancy (Conservancy) is the non-Federal sponsor.

**Current Status:** Received permits for wetland construction. Completed containment levees for seasonal wetland, completed the test levee validating levee construction and continuing site preparation through plans and specifications of N2 Levee, South Levee, and intertidal berms. FY 07 activities include award bulk fill contract for seasonal wetland, continue site preparation through construction of South Levee and tidal wetland containment cells.

### **WATERSHEDS**

#### **San Pablo Bay Watershed, CA**

**Authority:** Flood Control Act of 1962

**FY 2007 Budget Request (000's):** \$0

**Project Description:** The San Pablo Bay Watershed drains the northern reaches of the San Francisco Bay, California. This project will address near, mid, and long-term restoration in the San Pablo Bay Watershed by providing technical planning and design assistance to local entities to further the restoration of designated sites, to clarify restoration parameters, goals, and objectives, and to identify and prioritize future restoration opportunities. The process will provide resource protection by the construction of replacement wetlands, protection from additional pollution, and creation of habitat to increase the biodiversity and habitat values in the watershed. One goal is to provide a reliable public water supply through the multipurpose use of the existing systems by using treated wastewater for agricultural production and managed wetlands.

**Current Status:** Continue development of the San Pablo Bay Watershed Restoration Program with the identification of spin-off projects and the deployment of technical assistance. Further these goals by continuing the outreach with non-Federal entities to support the development of restoration projects.

## **LEVEES**

### **CALFED Levee System Integrity Program, CA**

**Authority:** CALFED Bay-Delta Authorization Act (PL 108-3610; Energy and Water Development Appropriations Act, 2006, Title V (PL 109-103))

**FY 2007 Budget Request (000's):** \$0

**Project Description:** Through Federal and State legislation Sacramento's District Engineer is designated to represent the U.S. Army Corps Engineers in addressing CALFED issues in coordination with the Secretary of the Army. The Corps is designated as the Lead Federal Agency for the CALFED Levee System Integrity Program (LSIP) in partnership with the State Lead Agencies, California Departments of Water Resources and Fish and Game (DWR, DFG) and in coordination with the Secretary of the Interior other CALFED agencies, and stakeholders.

**Current Status:** The original budget crosscut provided in the President's FY 2006 Budget request listed \$1.1 million for this program, but the Corps' Congressional Justifications did not request these funds. The Sacramento District received funds in December 2005 via the Energy and Water Development Appropriations Act, 2006 to initiate efforts as Lead Federal Agency for the CALFED Levee System Integrity Program (LSIP). The Act allocated \$500,000 to prepare a "180-Day" Report to Congress (by 16 May 2006) to describe the Corps' capabilities, strategies, plans and recommendations to identify specific levee projects and priorities, pertinent standards and criteria, decision documents and related support studies, and budget and schedules for the authorized \$90 million of levee work through 2010. It will also propose streamlining Corps procedures, consider multiple benefits, rationale for project justification, and address related actions:

- Delta Risk Management Strategy (DRMS) - to gather data, assess existing conditions and future scenarios, identify system-wide problems, risks, standards, criteria, strategies, and priorities for potential levee projects and program actions;
- Sacramento-San Joaquin Delta Islands and Levees Feasibility Study – will coordinate and incorporate results of the DRMS into a Corps Feasibility Study/EIS-EIR (to be initiated in FY 2006) to collaboratively establish the type and extent of Corps/Federal interest in programmatic and site-specific long-term levee system improvements, consistent with the CALFED LSIP and ROD;
- Delta Levee Emergency Management & Response Plan(s) – the catastrophic effects of hurricanes in the Gulf Coast region in 2005 renewed and intensified the

interest in developing and implementing an effective plan(s) for Bay-Delta region and Central Valley tributaries; and

- Coordination with CALFED Partners, Stakeholders, Agencies & Public – to define needs, goals, objectives, activities, budgets, priorities, procedures, products, and monitor progress; coordinate activities; share expertise, information and tools; and scope and execute levee stability and related components of Program.

### **Sacramento-San Joaquin Delta Islands and Levees, CA, Feasibility Study**

**Authority:** Energy and Water Development Appropriations Act, 2006, Title V (PL 109-103)

**FY 2007 Budget Request (000's):** \$0

**Project Description:** The study area is located in Sacramento, San Joaquin, and Contra Costa counties, California and extends from Walnut Grove south to Tracy and from the City of Stockton west to Suisun Bay. The area within the Sacramento-San Joaquin Delta consists of about 700,000 acres of land segregated into some 100 tracts and islands and 1,100 miles of levees. A Reconnaissance Report was completed in 2005, which recommended proceeding to the feasibility study phase.

**Current Status:** The Sacramento-San Joaquin Delta Islands and Levees Feasibility Study/EIS-EIR will be initiated in FY 2006 to collaboratively establish the type and extent of Corps/Federal interest in programmatic and site-specific long-term levee system improvements, consistent with the CALFED LSIP and ROD. The feasibility study and report will incorporate and complement the Delta Risk Management Strategy (DRMS), which is being implemented by the State of California, currently at State expense, to gather data, assess existing conditions and future scenarios, identify system-wide problems, risks, standards, criteria, strategies, and priorities for potential levee projects and program actions. Initiation of the Feasibility Study/EIS-EIR is pending non-Federal sponsor's execution of a Feasibility Cost Sharing Agreement and direction to proceed.

### **Sacramento-San Joaquin Delta, CA, Special Study**

**Authority:** Senate Resolution, 1 June 1948; Energy and Water Development Appropriations Act, 2006, Title V

**FY 2007 Budget Request (000's):** \$0

**Project Description:** The special study area is located in Sacramento, San Joaquin, and Contra Costa counties, California and extends from Walnut Grove south to Tracy and from the city of Stockton west to Suisun Bay. The area within the Sacramento-San Joaquin Delta consists of about 700,000 acres of land segregated into some 100 tracts and islands and 1,100 miles of levees. The purpose of the study is to produce a regional planning report (RPR) for flood reduction, salinity intrusion caused by levee failures,

navigation, recreation, fish and wildlife, and long-term management of the complex island/waterway network in the Delta.

**Current Status:** The special study is on hold pending interest and ability of a non-Federal sponsor(s). Resumption of the study is dependent on a non-Federal sponsor's execution of a Feasibility Cost Sharing Agreement and direction to proceed.

**Lower San Joaquin River (Sacramento and San Joaquin River Basins Comprehensive Study), San Joaquin, Stanislaus, and Merced Counties, CA**

**Authority:** House Report 105-190, which accompanied the Energy and Water Development Appropriations Act of 1998 (Public Law 105-62).

**FY 2007 Budget Request (000's):** \$0

**Project Description:** A Reconnaissance Study of the Lower San Joaquin River was completed in 2005, which identified a Federal interest in a multiple purpose water resources project (e.g., flood damage reduction, ecosystem restoration) and resulted in the recommendation for proceeding to the feasibility study phase. The study investigated potential modifications of the Lower San Joaquin River and Tributaries Project, which was authorized by the Flood Control Act of 1944. Construction was initiated in 1956 and modifications of the project were made through the mid-1980s. Federally-constructed portions of the project consist of about 100 miles of intermittent levees along the San Joaquin River downstream of the Merced River, as well as along Paradise Cut, Old River, Camp Slough, and the lower reaches of the Stanislaus and Tuolumne Rivers. Levees vary in height from about 15 feet at the downstream end to an average of 6 to 8 feet. The project also included construction of New Hogan Dam on the Calaveras River, New Melones Dam on the Stanislaus River, and Old Don Pedro Dam on the Tuolumne River. Chowchilla and Eastside Bypasses were constructed by the State as part of the project.

**Current Status:** The initiation of the feasibility phase is on hold pending the non-Federal sponsor's execution of a Feasibility Cost Sharing Agreement and direction to proceed.

## **SCIENCE**

**Interagency Ecological Program**

Authority: Corps of Engineers Civil Works (CECW) Programmed Items (Code 901-181) Miscellaneous General Investigation

**FY 2007 Budget Request (000's):** \$0

**Project Description:** The Interagency Ecological Program (IEP) is an estuarine ecological monitoring and special study collaboration by 3 state and 6 federal agencies with management and/or regulatory responsibilities in the San Francisco Estuary and Sacramento-San Joaquin Delta, California. The 3 state agencies are the California Department of Fish and Game (DFG), California Department of Water Resource (DWR),

and California State Water Resource Control Board (SWRCB); the federal agencies include US Fish and Wildlife Service (USFWS), US Bureau of Reclamation (BuRec), US National Ocean and Atmospheric Administration Fisheries (NOAA Fisheries), US Geological Survey (USGS), US Environmental Protection Agency (USEPA), and the US Army Corps of Engineer (USACE). The purpose of this collaboration is to gather in an efficient, coordinated and cooperative way the ecological information required by the agencies to effectively carry out their management and regulatory responsibilities.

The goals and objectives to address the mission of the IEP are (1) describe the status and trends of aquatic ecological factors of interest in the estuary; (2) develop an understanding of environmental factors that influence observed aquatic ecological status and trends; (3) use knowledge of the previous information in a collaboration process to support natural resource planning, management, and regulatory activities in the estuary; (4) continually reassess and enhance long-term monitoring and research activities that demonstrate scientific excellence; (5) provide scientific information about the estuary that is accurate, accessible, reliable, and timely; and (6) respond to management needs in a timely fashion.

**Current Status:** The Interagency Ecological Program is comprised of long-term monitoring, water operations monitoring and special studies. The IEP is committed in conducted the mandated monitoring studies required by NOAA Fisheries and FWS biological opinions and SWRCB Water Rights Decision D-1641. There is also a commitment to continue providing the “real-time” data needed to make water operation decisions

## **INTEGRATED REGIONAL WATER MANAGEMENT**

### **Guadalupe River, CA**

**Authority:** Water Resources Development Act (WRDA) 1986; Energy and Water Development Appropriations Acts (EWDAA), 1990, 1992 and 2002.

**FY 2007 Budget Request (000's):** \$5,000

**Project Description:** The project is located in San Jose, Santa Clara County, California. The Guadalupe River drains an area of about 160 square miles and its 100-year flood plain encompasses approximately 7,000 acres. Authorized plan consists of 2.6 miles of channel improvements along Guadalupe River between Interstate Highways 280 and 880, and provides for fish and wildlife mitigation. Santa Clara Valley Water District (SCVWD), the local sponsor, is paying 100 percent of the difference in cost between their Locally Preferred Plan (LPP) and the National Economic Development (NED) plan. During the March 1995 storm (25-year event), there was substantial street flooding caused by out-of-bank flooding in Reach 3. The project will provide 100-year flood protection to downtown San Jose, including approximately 1,020 commercial, industrial, and public structures, 3,270 private residences, four major traffic arteries and San Jose International Airport.

**Current Status:** Contract award and construction of railroad bridge replacements. Project and mitigation closeout.

**Napa River, CA**

**Authority:** Flood Control Acts of 1965 & 1976

**FY 2007 Budget Request (000's):** \$9,000

**Project Description:** The project is located in the city of Napa, CA. A major portion of the presently developed area of the city is located in a high flood hazard area and is subject to flooding. The NED Plan would provide a 100-year level of protection from the Napa River and Napa Creek and would consist of overbank excavation, floodwalls, vertical walls, levees, bridges, pumping stations, and flowage easements. The plan also includes recreation trails and incidental restoration.

**Current Status:** Much development is being planned due to the fact that Napa flood problem will be eliminated. PCA allows local sponsor to be reimbursed annually for project costs over 50 percent. Sponsor has requested this reimbursement begin and has provided initial crediting information. Reimbursement is contingent upon sufficient funding. Local sponsor has completed railroad bridge, which was part of a Section 215 agreement, executed 16 January 2002, and now wishes to be reimbursed per the agreement. Partial reimbursement of \$500k was made in FY 2003. Limited funding impacts reimbursements to the sponsor. During FY 2006, funds will be spent on the completion of contract 2East and award of construction contract 2West. During FY 2007, funds will be spent on construction of contract 2West, and plans and specs for Napa Wine Train relocation.

**Santa Ana River Mainstem, CA**

**Authority:** WRDA 1986 (PL-99-662), Energy & Water Appropriations Act, 1988 (San Timoteo), WRDA 1990 (Santa Ana Trails), 1996 (Prado Dam, SR 71)

**FY 2007 Budget Request (000's):** \$50,000

**Project Description:** The project is located along a 75-mile (mi) reach of Santa Ana River in Orange, San Bernardino and Riverside Counties. Plan of improvement: Seven Oaks Dam (145,600 acre-feet), management of overflow area-Seven Oaks to Prado (35 mi); raise Mill Creek levee (2.4 mi); additional storage at Prado (140,600 acre-feet); improvements along: Oak Street Drain/Riverside County (3.6 mi) Santiago Creek/Orange County (1.2 mi), and lower Santa Ana River (31 mi); recreation development; mitigation and preservation; and San Timoteo (5.4 mi).

**Current Status:** Continue Construction: Complete Prado Dam Phase 2a Dikes. Complete Reach 9 Phase 2, and Reach 5, 6, and 8 landscaping.

## OVERSIGHT & COORDINATION

### *General Oversight and Coordination*

**Authority:** Corps of Engineers Civil Works (CECW) Programmed Items (Code 901-181) Miscellaneous General Investigation; CALFED Bay-Delta Authorization Act (PL 108-361); Energy and Water Development Appropriations Act, 2006 (PL 109-103)

**FY 2007 Budget Request (000's):** \$0

**Project Description:** PL 108-361 authorized \$25 million for all Federal CALFED agencies for FYs 2005 through 2010 to support ongoing coordination with CALFED partners, stakeholders, agencies and public to define needs, goals, objectives, activities, budgets, priorities, procedures, products, monitor progress; coordinate activities; share expertise, information and tools; and scope and execute levee stability and related components of Program.

**Current Status:** Ongoing coordination actions are being accomplished in accord with allocated funds.

## **USDA NATURAL RESOURCES CONSERVATION SERVICE**

### **Ecosystem Restoration Program**

#### **Working Landscapes and Ecosystem Restoration**

**Authority:** Public Law 107-171, Farm Security and Rural Investment Act of 2002 (Environmental Quality Incentive Program Section 1240 of the Food Security Act of 1985 as amended by Section 2301 of Public Law 107-171; Wetland Reserve Program Section 1237 of Food Security Act of 1985 as amended by Section 2201 of Public Law 107-171); Public Law 74-46, The Soil Conservation and Domestic Allotment Act of 1935 and The Soil and Water Resources Conservation Act of 1977, Conservation Operations.

**FY 2007 Budget Request (000's):** Included in base budget for Conservation Operations

**Project Description:** NRCS provides technical assistance for on-farm natural resources conservation activities, including conservation planning through its Conservation Operations authority, and provides technical and financial assistance to agricultural producers to assist with their natural resource concerns through the Environmental Quality Incentive Program. NRCS also provides technical and financial assistance to landowners for qualifying wetland restoration and preservation projects through the Wetland Reserve Program.

**Current Status:** NRCS provides Federal leadership for on farm natural resources conservation activities, and provides technical and financial assistance to agricultural producers to assist with conservation and other natural resource concerns. NRCS works closely with other federal, state, local, and environmental constituents to coordinate implementation of on farm conservation activities with the landowner. NRCS implements the Wetland Reserve Program in partnership with other federal, state, local, and environmental organizations to maximize the benefits and effectiveness of the Program.

#### **Working Landscapes and Ecosystem Restoration Projects**

**Authority:** Public Law 107-171, Farm Security and Rural Investment Act of 2002 (Environmental Quality Incentive Program Section 1240 of the Food Security Act of 1985 as amended by Section 2301 of Public Law 107-171; Wetland Reserve Program Section 1237 of Food Security Act of 1985 as amended by Section 2201 of Public Law 107-171).

**FY 2007 Budget Request (000's):** EQIP \$17,253 estimated based on prior years and initial county allocations for FY06. WRP \$8,000 estimated based on prior years.

**Project Description:** Implement projects using Environmental Quality Incentive Program (EQIP) incentive payments which complement the objectives contained in the CALFED Ecosystem Restoration Program while focusing on farms. Signups are held at

local service centers located in the CALFED solution area. Approved projects will optimize environmental benefits while addressing natural resource concerns and are awarded based on criteria consistent with the goals of NRCS' Environmental Quality Incentive Program.

Implement projects using Wetland Reserve Program (WRP) funding which complement the objectives contained in the CALFED Ecosystem Restoration Program and the objectives of the WRP. The WRP objectives are to purchase conservation easements from willing sellers, restore and protect wetlands in agricultural settings, remove environmentally sensitive, marginal cropland from cultivation, assist landowners with restoration of wetland hydrology and contribute to the national goal of no net loss of wetlands. Signups are held at local service centers located in the CALFED solution area. Applications are ranked using state wide ranking criteria. Approved projects optimize environmental benefits while addressing natural resource concerns and are awarded based on their state wide rank consistent with the goals of NRCS' Wetland Reserve Program.

**Current Status:** Funding is anticipated in 2007 for EQIP and WRP. Specific actions in FY 2006 and FY 2007 will depend on application for on-farm activities.

## **Water Use Efficiency Program**

### **Water Conservation**

**Authority:** Public Law 107-171, Farm Security and Rural Investment Act of 2002 (Environmental Quality Incentive Program Section 1240 of the Food Security Act of 1985 as amended by Section 2301 of Public Law 107-171; Ground and Surface Water Conservation Section 1240I of the Food Security Act of 1985 as amended by Section 2301 of Public Law 107-171); Public Law 74-46, The Soil Conservation and Domestic Allotment Act of 1935 and The Soil and Water Resources Conservation Act of 1977, Conservation Operations.

**FY 2007 Budget Request (000's):** Included in base budget for Conservation Operations.

**Project Description:** NRCS provides technical assistance for on farm water conservation activities, including conservation planning through its Conservation Operations authority, and provides technical and financial assistance to agricultural producers to assist with water conservation and other natural resource concerns through the Farm Bill authorities.

**Current Status:** NRCS provides federal leadership for on-farm water conservation activities, and provides technical and financial assistance to agricultural producers to assist with water conservation and other natural resource concerns. NRCS works closely with other federal, state, local, and environmental constituents on water conservation issues through the State Technical Committee.

### **Water Conservation Projects**

**Authority:** Public Law 107-171, Farm Security and Rural Investment Act of 2002 (Section 1240 of the Food Security Act of 1985 as amended by Section 2301 of Public Law 107-171; Ground and Surface Water Conservation Section 1240I of the Food Security Act of 1985 as amended by Section 2301 of Public Law 107-171).

**FY 2007 Budget Request (000's):** \$6,684 estimated based on prior years and initial allocations to counties for FY06.

**Project Description:** Ground and Surface Water Conservation provides a special initiative through EQIP for ground and surface water conservation projects. Projects are implemented on farm using the EQIP Ground and Surface Water Conservation incentive payments which complement the CALFED Water Use Efficiency program water conservation objectives. Signups are held at local service centers located in the CALFED solution area. Approved projects optimize environmental benefits while addressing natural resource concerns and are awarded based on local ranking criteria consistent with the goals of NRCS' EQIP Ground and Surface Water Conservation.

**Current Status:** Funding is anticipated in 2007. Specific actions for FY 2006 and FY 2007 will depend on applications received.

## **NOAA FISHERIES**

### **ECOSYSTEM RESTORATION PROGRAM**

#### **Ecosystem Restoration Program (ERP) Oversight & Coordination**

**Authority:** Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)

**FY 2007 Budget Request (000's):** \$300

**Project Description:** Continue ERP planning efforts in collaboration with USFWS, California Department of Fish and Game and CALFED. Activities include tracking schedules, finances, and performance; coordination of Program activities to ensure Program balance and integration; coordination of public outreach and involvement, including tribal, environmental justice, and public advisory activities in accordance with the Federal Advisory Committee Act. NOAA Fisheries, through an interagency process, is also involved in planning and developing the format and guidelines for preparing Action Specific Implementation Plans (ASIP) for all CALFED projects in order to meet the requirement of FESA, CESA, and NCCPA.

**Current Status:** For FY 2007, the program will continue management-level participation in CALFED coordination meetings, continue work on multi-year planning documents, work on defining and streamlining the Action-Specific Implementation Plan (ASIP), and participate in developing the Delta Regional Ecosystem Implementation Plan, the South Delta Improvements Package, the Proposal Solicitation Process (PSP), and serve on annual PSP selection panels to review and fund specific projects in the CALFED program. Staff and Management participate in quarterly ERP Science Board meetings to assist coordination of implementation and integration the ERP program overall in meeting CALFED goals and objectives.

#### **Screen Engineering and Review**

**Authority:** Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.).

**FY 2007 Budget Request (000's):** \$100

**Project Description:** Activities include technical review and comment of proposed projects under the Anadromous Fish Screen Program (AFSP). The AFSP is to protect juvenile chinook salmon (all runs), steelhead trout, green and white sturgeon, striped bass and American shad from entrainment at priority diversions throughout the Central Valley. Section 3406(b)(21) of the Central Valley Project Improvement Act (CVPIA) requires the Secretary of the Interior to assist the State of California in developing and implementing measures to avoid losses of juvenile anadromous fish resulting from unscreened or inadequately screened diversions on the Sacramento and San Joaquin

Rivers, their tributaries, the Delta, and the Suisun Marsh. Additionally, all AFSP projects meet Goal 3 of the CALFED Ecosystem Restoration Program's (ERP) Draft Stage 1 Implementation Plan (8/1/01, Page 22) which states that, "...the goal is to maintain and/or enhance populations of selected species for sustainable commercial and recreational harvest, consistent with the other ERP Strategic Goals."

**Current Status:** Staff reviews CALFED-funded fish screens and improvement projects for compliance with section 7 of the Endangered Species Act and existing biological opinions. Specific issues for program staff include reviewing the State Water Project and Central Valley Project Fish Collection Facilities in the Delta. Staff participates on the Tracy Technical Advisory Team, South Delta Fish Facility Forum, and Central Valley Fish Facility Team, all of which are involved in developing new ways to salvage fish from water and debris and return them unharmed to the Delta. Staff reviews and comments on fish studies, research projects, facility evaluations, and operations and maintenance of the Delta fish facilities for compliance with current biological opinions.

Many of the research projects are funded by either CVPIA or CALFED. Staff works with our engineers in Santa Rosa and at the Bureau of Reclamation to approve CVPIA funded fish screen projects. In the past NMFS has had 3-4 biologists and engineers working almost full time on these projects. In the future (out till 2006) there are studies and screen improvements required in the OCAP biological opinion that will have to be evaluated and commented on with respect to listed fish concern.

## **ENVIRONMENTAL WATER ACCOUNT**

### **EWA Program Oversight & Coordination**

**Authority:** Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)

**FY 2007 Budget Request (000's):** \$150

**Project Description:** Five federal and State agencies administer the EWA. The California Department of Water Resources (DWR) and the Bureau of Reclamation (Reclamation), or the "Project Agencies," are responsible for acquiring water assets and for storing and conveying the assets through use of the SWP and CVP facilities. The "Management Agencies," which include the State and federal fishery agencies (National Marine Fishery Service [NOAA Fisheries], U.S. Fish and Wildlife Service [USFWS], and the California Department of Fish and Game [CDFG]), use the EWA to protect and restore fish. All five EWA agencies are responsible for the day-to-day program management of actions taken to protect and benefit fish (e.g., pumping reductions to protect fish) and in stream flow enhancements to help facilitate fish population recovery.

**Current Status:** The EWA program, as it is being implemented through 2007, incorporates functionally equivalent purchases and actions within the framework of the CALFED ROD and EWA Operating Principles Agreement. Ongoing actions in FY 2007

include using staff expertise on the Central Valley Project and State Water Project to assess operational impacts on juvenile or adult migrating listed winter-run and spring-run Chinook and steelhead.

## SCIENCE

### **Interagency Ecological Program**

**Authority:** Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)

**FY 2007 Budget Request (000's):** \$75

**Project Description:** The Interagency Ecological Program (IEP) is an estuarine ecological monitoring and special study collaboration by 3 state and 6 federal agencies with management and/or regulatory responsibilities in the San Francisco Estuary and Sacramento-San Joaquin Delta, California. The 3 state agencies are the California Department of Fish and Game (DFG), California Department of Water Resource (DWR), and California State Water Resource Control Board (SWRCB); the federal agencies include US Fish and Wildlife Service (USFWS), US Bureau of Reclamation (USBR), US National Ocean and Atmospheric Administration Fisheries (NOAA Fisheries), US Geological Survey (USGS), US Environmental Protection Agency (USEPA), and the US Army Corps of Engineer (USACE). The purpose of this collaboration is to gather in an efficient, coordinated and cooperative way the ecological information required by the agencies to effectively carry out their management and regulatory responsibilities.

The goals and objectives to address the mission of the IEP are (1) describe the status and trends of aquatic ecological factors of interest in the estuary; (2) develop an understanding of environmental factors that influence observed aquatic ecological status and trends; (3) use knowledge of the previous information in a collaboration process to support natural resource planning, management, and regulatory activities in the estuary; (4) continually reassess and enhance long-term monitoring and research activities that demonstrate scientific excellence; (5) provide scientific information about the estuary that is accurate, accessible, reliable, and timely; and (6) respond to management needs in a timely fashion.

**Current Status:** The Interagency Ecological Program comprises long-term monitoring, water operations monitoring and special studies. The IEP is committed to conducting the mandated monitoring studies required by NOAA Fisheries and FWS biological opinions and SWRCB Water Rights Decision D-1641. There is also a commitment to continue providing the “real-time” data needed to make water operation decisions.

## OVERSIGHT & COORDINATION

**General Oversight and Coordination**

**Authority:** Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)

**FY 2007 Budget Request (000's):** \$150

**Project Description:** Activities include participation at CALFED agency coordination meetings, Bay-Delta Public Advisory Committee meetings, California Bay-Delta Authority meetings, input into the development of and review of CALFED program plans, crosscut budgets, and annual reports.

## US GEOLOGICAL SURVEY

### SCIENCE

#### *Interagency Ecological Program*

**Authority:** Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

**FY 2007 Budget Request (000's):** \$622

**Project Description:** In cooperation with other agencies in the Interagency Ecological Program (IEP: US Fish & Wildlife Service, US Bureau of Reclamation, USGS, US Army Corps of Engineers, US Environmental Protection Agency, CA Water Resources Control Board, CA Department of Water Resources, and CA Department of Fish & Game), the USGS is applying new technologies to measure within-Delta water transfers and Delta outflow into the Bay, providing information needed for documenting salt transport mechanisms and managing freshwater flow to meet salinity standards.

**Current Status:** Research conducted in the Delta Cross Channel (DCC) has focused on better understanding the hydrodynamics of flows supporting the development of management strategies for balancing water-quality needs against the survival of out-migrating Chinook salmon. DCC gate operations that improve water quality in the Central and South Delta are believed to increase mortality of outmigrating juvenile salmon by diverting them into the Central Delta, away from the more direct route to the ocean. Three different technologies were used in combination: (1) hydrodynamic measurements of the velocity fields within the Sacramento River/Georgiana Slough junction, (2) hydroacoustic monitoring stations deployed at the Sacramento River/Georgiana Slough junction to measure the distribution of fish within Georgiana Slough and at the boundaries of velocity maps on the Sacramento, and (3) fish fitted with acoustic tags to observe the detailed movements of individual juvenile salmon within a junction and to enable the computation of time of travel and mortality estimates for individuals within channels.

In FY 2006 we anticipate that State matching funds, which in previous years had been made available through the Interagency Ecological Program, will be shifted from supporting USGS Bay/Delta Hydrodynamic studies and 3D Modeling research activities. These funds will be used to conduct State mandated monitoring of fish populations and water quality in the Delta.

USGS Federal Matching Funds will be reduced to \$339,000, and USGS IEP-related activities will be limited to Delta flow and database management, Bay salinity monitoring, and operation of thermograph stations.

Related activities include studies of flow and salt transport in the central and south Delta, and Suisun Marsh.

### **Lead Scientist Oversight**

**Authority:** Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

**FY 2007 Budget Request (000's):** \$712

**Project Description:** The U.S. Geological Survey provides support for the CALFED Science Program's Lead Scientist and Staff.

The Lead Scientist has the responsibility to assure that monitoring is conducted to provide information to assess progress toward meeting goals and objectives of the CALFED Program. The Lead Scientist is responsible for establishing an overall monitoring strategy and performance measures for CALFED. System-wide status and trends monitoring and regional monitoring are particular responsibilities of the Lead Scientist with oversight of the monitoring of individual projects conducted by the Program Elements. Coordination of monitoring components among CALFED Program Elements is part of this responsibility.

With regard to research, the Lead Scientist is responsible for producing CALFED studies that are relevant, authoritative and objective. The studies should progressively reduce uncertainties about critical issues, add to the knowledge that aids water management and ecosystem restoration, and help prepare for future uncertainties. Identifying the state of knowledge is accomplished by white papers, workshops of experts, or other objective, expert-based analyses. Prioritization of research began with the 12 uncertainties specified in the ERP Strategic Plan.

The Lead Scientist has the responsibility for making sure that the findings of the CALFED Science Program are shared with the Policy Group, Program managers, the public, and the scientific community.

**Current Status:** The Lead Scientist and Staff are in place.

### **Place-based study of SF Bay**

**Authority:** Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

**FY 2007 Budget Request (000's):** \$1,283

**Project Description:** The mission of Place Based Studies, now called Priority Ecosystem Science (PES), is to provide science in support of adaptive management of ecosystems that have near-term societal concern and significant long-term societal value. These studies are designed to serve local ecosystem management needs and to provide transferable knowledge and approaches. PES efforts focus in areas where new integrated science approaches can be developed to address the needs of a diverse group of decision-makers. Activities require collaboration and integration of expertise to achieve a system-scale understanding of the natural and anthropogenic factors affecting ecosystems and to better understand the interactive nature of resources and the environment.

**Current Status:** Current studies cover a range of activities from the Delta through Suisun Bay to the Golden Gate dealing with hydrodynamic processes, sediment budgets, and salt transport. The information and knowledge produced is integral to the developing understanding of wetland management, salt pond reclamation, salinity control and fish movements within and through the Delta.

### **Sacramento Basin National Water Quality Assessment (NAWQA)**

**Authority:** Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

**FY 2007 Budget Request (000's):** \$732

**Project Description:** The National Water-Quality Assessment (NAWQA) Sacramento Basin Program is designed to assess the status and trends of water quality in the basin, and to understand the factors that affect it. Specifically, the Program goals are to characterize the condition of streams and ground water in the basin, evaluate how the water quality is changing over time, and to identify how natural features and human activities affect the quality of streams and ground water. The NAWQA Program is a long-term cyclical study that began in 1991.

**Current Status:** The Sacramento Basin Program has completed the first cycle, and is preparing for its second cycle. Recent activity has focused on the evaluation of Dissolved Organic Carbon (DOC) transported by the Sacramento River into the Delta and its effects on drinking water quality. The CALFED Drinking Water Program needs information on DOC concentrations and loads to the Delta. This project will provide critical information on the long-term trends in carbon loading and will improve the accuracy of flow measurements from the upstream sources.

### **San Joaquin Basin National Water Quality Assessment (NAWQA)**

**Authority:** Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

**FY 2007 Budget Request (000's):** \$1,426

**Project Description:** The National Water-Quality Assessment (NAWQA) San Joaquin Basin Program is designed to assess the status and trends of water quality in the basin, and to understand the factors that affect it. Specifically, the Program goals are to characterize the condition of streams and ground water in the basin, evaluate how the water quality is changing over time, and to identify how natural features and human activities affect the quality of streams and ground water. The NAWQA Program is a long-term cyclical study that began in 1991.

The San Joaquin Basin National Water Quality Assessment is a long-term Program, and is one of 42 nationwide. Cycle 1 (Water Quality Status) started in 1991, and was completed in 2001. Cycle 2 (Water Quality Trends and Understanding) began in 2001, and is scheduled to end in 2011.

In the second cycle, efforts now in process focus on five major activities:

(1) Status assessment of mercury; (2) Status assessment of ground-water drinking water sources; (3) Assessment of water-quality trends in streams and ground water; (4) Topical study of transport of anthropogenic and natural contaminants to community supply wells; (5) Topical study of agricultural chemicals: sources, transport and fate.

**Current Status:** The San Joaquin-Tulare Basin Program is in its second study cycle, and is one of five areas nationwide participating in an intensive study of the sources, transport, and fate of agricultural chemicals in relatively small agricultural watersheds. The primary goal of these studies is to estimate a mass balance for water and chemicals. To achieve this goal, all compartments of the hydrologic cycle have been monitored. These compartments include the atmosphere, surface runoff, vadose zone, and ground water. In addition, ground-water processes along a flowpath, and interactions between ground water and surface water at the toe of the flowpath have been monitored. The San Joaquin site is located within the Merced River Basin on the east side of the valley. The objective is to apply the information and understanding gained in this intensive study to larger areas, which in this case includes the Sacramento-San Joaquin River Delta.

### **Toxics Substances Hydrology Program**

**Authority:** Organic Act of March 3, 1879, as amended (43 U.S.C. 31 et seq.)

**FY 2007 Budget Request (000's):** \$144

**Project Description:** The San Francisco Bay-Estuary Toxic Substances Hydrology (Toxics) Program is an ongoing, long-term estuarine study designed to quantitatively define the processes that affect contaminant transport and distribution in the San

San Francisco Bay estuary. It is part of the national Toxic Substances Hydrology Program. The goal is to create the scientific foundation from which specific, management-oriented problems may be addressed.

The U.S. Geological Survey (USGS) Toxic Substances Hydrology (Toxics) Program was initiated in 1982 to provide objective and reliable scientific information needed to develop policies and practices that help avoid exposure to toxic substances, mitigate environmental deterioration from contaminants, provide cost-effective cleanup and waste-disposal strategies, and reduce future risk of contamination.

San Francisco Bay receives a broad range of organic and inorganic contaminants that vary widely in their sources, seasonality, toxicity, and environmental behavior. Despite an increasing awareness of potential problems, the effects of organic contaminants in the estuarine environment are not well understood. Since 1991, the USGS has been studying the fate and effects of these contaminants in San Francisco Bay as part of the Toxic Substances Hydrology Program. This study is referenced as the San Francisco Bay Toxics Project.

The San Francisco Bay-Estuary Toxic Substances Hydrology (Toxics) Study is unique among estuarine studies in its long-term approach to quantitatively defining the processes that affect contaminant transport and distribution in major urbanized estuaries. These studies create the scientific foundation from which specific, management oriented problems may be addressed. The necessary balance between maintaining this scientific foundation and responding effectively to critical management issues is demonstrated by the complementary nature of Toxics and USGS Place-based studies in San Francisco Bay.

**Current Status:** The Toxics Program is supporting the development of sediment-transport, and two- and three-dimensional numerical models that build on our present knowledge to better understand the occurrence and effects of pesticides and related toxics on sensitive fish species in the Delta and Bay. In combination with other USGS scientific programs in the San Francisco Bay/Delta system, this Program provides water-resource regional managers and the general public with scientific information that describes relationships among flow, circulation, contaminant distribution and effects, and habitat alteration.

## US FISH AND WILDLIFE SERVICE

### ECOSYSTEM RESTORATION PROGRAM

#### ERP Administration

**Authority:** Central Valley Project Improvement Act, PL. 102-575 § 3406; CALFED Bay-Delta Authorization Act, PL 108-361; Fish and Wildlife Coordination Act, 16 U.S.C. 661-667(e)

**FY 2007 Budget Request (000's):** \$1,252

**Project Description:** The Service, as an Ecosystem Restoration Program (ERP) implementing agency, will continue ERP planning efforts in collaboration with NOAA Fisheries, CDFG and CBDA. Comprehensive efforts are currently underway to develop regional ecosystem restoration plans for areas such as Suisun Marsh and the Delta. These multi-agency efforts strive to restore the systems while working with stakeholders in a manner responsive to their concerns. Under the CALFED Bay-Delta Authorization Act, the Service is charged with coordinating and tracking all ecosystem restoration actions using federal funds under the CALFED account. The Service tracks schedules, finances, and performance; coordinates Program activities to ensure Program balance and integration; coordinates public outreach and involvement, including tribal, environmental justice, and public advisory activities in accordance with the Federal Advisory Committee Act. The Service, through an interagency process, is also involved in planning and developing the format and guidelines for preparing Action Specific Implementation Plans (ASIP) for all CALFED projects in order to meet the requirement of FESA, CESA, and NCCPA.

**Current Status:** The Service, as an ERP implementing agency, will continue ERP planning efforts in collaboration with NOAA Fisheries, CDFG and CBDA. The Service will continue to participate in developing regional ecosystem restoration plans for areas such as Suisun Marsh and the Delta. The Service will continue to track schedules, finances, and performance; coordinate Program activities to ensure Program balance and integration; coordinate public outreach and involvement, including tribal, environmental justice, and public advisory activities in accordance with the Federal Advisory Committee Act. The Service, through an interagency process, will continue to be involved in planning and developing the format and guidelines for preparing Action Specific Implementation Plans (ASIP) for all CALFED projects in order to meet the requirement of FESA, CESA, and NCCPA.

In 2004, the Ecosystem Restoration Program implementing agencies completed a comprehensive assessment of the overall status of the Ecosystem Restoration Program towards achieving the implementation milestones identified in the Multi-Species Conservation Strategy for the CALFED Bay-Delta Program. This assessment found that progress on nearly 80 percent of the milestones was on or ahead of schedule. This

progress was sufficient to allow the state and federal regulatory agencies to continue coverage under the state and federal Endangered Species Act for the entire CALFED Program and contributed to their continuing the program-level commitments.

***Key Milestones:***

The Record of Decision for the CALFED Programmatic Environmental Impact Statement/Report (PEIS/R) (Record of Decision) incorporated 119 milestones contained in the endangered species programmatic biological opinions and Natural Community Conservation Plan Approval for the CALFED Program. The milestones, developed primarily from targets or actions in the ERP Plan and Water Quality Program (WQP) Plan, were those actions the fish and wildlife agencies expected would be implemented during Stage 1 (the first seven years of the 30-year program) to achieve CALFED's conservation goals.

**Central Valley Joint Venture**

***Authority:*** North American Waterfowl Management Plan 1986

***FY 2007 Budget Request (000's):*** \$580

***Project Description:*** The Central Valley Joint Venture (CVJV), one of fourteen North American Joint Ventures, is a public-private partnership of 18 agencies and conservation organizations. The mission is to protect, restore, and enhance migratory bird habitat in the Central Valley watershed of California.

***Current Status:*** The Joint Venture is currently in the process of updating its implementation plan, and will include goals for the conservation of breeding and wintering waterfowl, breeding and wintering shorebirds, grassland and riparian birds, and other waterbirds.

***Key Milestones:***

- Protect 80,000 acres of existing wetlands through acquisition of fee-title or perpetual conservation easements.
- Secure an incremental, firm 402,450 acre-foot water supply that is of suitable quality and is delivered in a timely manner for use by National Wildlife Refuges (NWR's), State Wildlife Areas (WA's), and the private wetlands within the Grasslands Resource Conservation District (GRCD).
- Secure Central Valley Project (CVP) power for NWR's, WA's, GRCD, and other public and private lands dedicated to wetland management.
- Increase wetland areas by 120,000 acres and protect these wetlands in perpetuity by acquisition of fee-title or conservation easement.
- Enhance all wetland habitats within the CVJV project area.  
Enhance waterfowl habitat on 443,000 acres of agricultural lands annually.

### **Cooperative Endangered Species Conservation Fund**

**Authority:** Endangered Species Act of 1973, 16 U.S.C 1361 et seq., as amended; Department of the Interior Appropriations, P.L.107-63.

**FY 2007 Budget Request (000's): TBD**

**Project Description:** The Cooperative Endangered Species Conservation Fund (CESCF) (Section 6 of the Endangered Species Act) provides funding to States and Territories for species and habitat conservation actions on non-federal lands. States and Territories must contribute a minimum non-federal match of 25% for the estimated program costs of approved projects, or 10% when two or more States or Territories implement a joint project. A State or Territory must currently have, or enter into a cooperative agreement with the U.S. Fish and Wildlife Service (Service) to receive grant funds.

Four grant programs are available through the CESCF, they include the "Traditional" Conservation Grants and the "Nontraditional" Habitat Conservation Plan (HCP) Land Acquisition, HCP Planning Assistance, and Recovery Land Acquisition Grants. Traditional conservation grants are based on a formula driven award. The Recovery Land Acquisition grants are awarded based on a regional competition, whereas the HCP Land Acquisition and Planning Assistance grants are awarded based on a national competition.

**Current Status:** A formal request for traditional grant proposals was issued on October 24, 2005. The grant proposal deadline to the California Department of Fish and Game was December 9, 2005. The Service has not yet received a list of the proposals. A formal request for nontraditional section 6 grants was issued on December 21, 2005. Proposals are due March 20, 2006. According to the request, approximately \$12 million will be available for Recovery Land Acquisition, \$44 million will be available for Habitat Conservation Land Acquisition and \$7 million will be available for Habitat Conservation Planning Assistance. Grant selection will be a result of regional or national competition. In FY 2005, we provided grant funding for two Recovery Land Acquisition proposals within the CalFed jurisdictional area. The Contra Costa goldfields project was for \$769,201 and the Sacramento Prairie vernal pools project was for \$500,000.

### **Endangered Species Recovery Program Funds**

**Authority:** Endangered Species Act of 1973, 16 U.S.C 1361 et seq., as amended

**FY 2007 Budget Request (000's): TBD**

**Project Description:** The Recovery Program's objective is to remove federally threatened and endangered species from the endangered species list or to downlist them from an endangered status to a threatened status. This objective is accomplished in three ways 1) through the development of comprehensive species-specific or ecosystem-specific recovery plans; 2) through the implementation of actions outlined in the recovery

plans; and 3) through the issuance of section 10(a)(1)(A) recovery permits for the enhancement and survival of each species.

**Current Status:** The program is currently in the process of completing numerous recovery plans and several others have been submitted for review and/or have been published. Plans currently under development include a final plan for vernal pool ecosystems of California and southern Oregon, a final plan for Chaparral communities in the east SF Bay area, a draft plan for plants of the Ione, CA area, a draft tidal marsh recovery plan for the SF Bay area, and a final plan for the western snowy plover.

In addition to recovery planning, numerous on-the-ground recovery actions are on-going, or have been completed. For example, several habitat creation and/or restoration projects are on-going or completed for the San Francisco garter snake; a full-scale captive propagation and reintroduction program is on-going for the riparian brush rabbit; and numerous projects are on-going or completed involving seed collection, storage, reintroduction, and research for numerous listed plant species.

The level of Endangered Species recovery program funds obligated to projects that overlap with CALFED goals are based two factors: availability of funds and project proposals. Recovery funding is primarily used to cover fixed costs first. Remaining funds are then used to support recovery efforts within the Sacramento Fish and Wildlife Office's geographic purview. Project selection is competitive and the level awarded varies annually; thus, FY06 activities occur opportunistically and cannot be projected.

***Key Milestones:***

- Western snowy plover June 2006
- Callippe silverspot butterfly recovery plan to be published June 2006
- Southern Sierra plants recovery plan to be published December 2006
- Chaparral recovery plan to be published December 2006
- Draft tidal marsh recovery plan to be published by December 2006
- Giant garter snake 2<sup>nd</sup> draft recovery plan to be published by August 2006
- Draft Ione plants recovery plan to be published December 2006
- Butte County meadowfoam genetics research to be completed March 2006
- More brush rabbits will be released throughout 2006
- Final vernal pool recovery plan published January 2006

**Land Acquisition**

**Authority:** Migratory Bird Conservation Act, The Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), The Endangered Species Act of 1973, as amended (PL 93-205), The Migratory Bird Hunting and Conservation Stamp Act (16 U.S.C. 718-718j, 48 Stat. 452), The Refuge Recreation Act of 1962 (87-714), The Refuge Recreation Act of 1962 (87-714), The Emergency Wetlands Resources Act of 1986 (PL. 99-645), Land and Water Conservation Fund (16 USC 4601 - 4601-11).

***FY 2007 Budget Request (000's): \$0***

**Project Description:** The objective is acquiring property, either in fee title or through perpetual conservation easements, for wildlife habitat protection, restoration or enhancement benefits within the National Wildlife Refuge System. The program is administered by USFWS Realty staff within approved project boundaries, in cooperation with refuge staff personnel. In addition to land acquisition, program responsibilities include land exchanges, rights-of-way, relocations and revenue sharing.

**Current Status:** In FY 2007, this program will continue to seek out willing sellers within approved refuge acquisition boundaries, concentrating on perpetual conservation easements. This program works with the U.S. Fish and Wildlife Division of Realty, which coordinates with willing sellers and local governments.

Within the Central Valley in the past 25 years, over 100,000 acres of private managed wetland habitat has been protected by conservation easements. Several existing refuges have had lands acquired in fee and added to current acreage, many with listed species as the focus. Current activities include a CALFED Bay Delta grant to acquire land near Modesto for the benefit of the listed riparian brush rabbit. Over \$10,000,000 has been spent the past five years in acquiring fee and easements in the Central Valley

In 2007, funds would be used to acquire two tracts of land from willing sellers consisting of approximately 250 acres. These properties are predominantly native irrigated pasture and will be protected by means of a perpetual conservation easement. The biggest threats to these properties are residential development and the conversion of grasslands, wetlands, and riparian habitat to croplands, orchards, or dairy operations that will provide little or not benefit to wildlife. The Service, currently has \$2.7 million dollars in grant funding from the CALFED Bay Delta grant program, to acquire and restore approximately 449 acres of land within the proposed North Delta NWR at Liberty Island. The Service is considering reassigning this grant to the Trust for Public Land for eventual transfer to the State of California Department of Fish and Game.

#### **North American Wetlands Conservation Fund (NAWCF)**

**Authority:** North American Wetlands Conservation Act of 1989 (PL. 101-233)

**FY 2007 Budget Request (000's):** TBD

The North American Wetlands Conservation Fund is a competitive grant program that does not have a set-aside for CALFED. Proposals for FY 2006 have not been awarded at this time and will not be finalized until the bi-yearly award cycles occur in March and July.

**Project Description:** The North American Wetlands Conservation Act (Act) of 1989 provides matching grants to organizations and individuals who have developed partnerships to carry out wetlands conservation projects in the United States, Canada, and Mexico. The Act was passed, in part, to support activities under the North American

Waterfowl Management Plan, an international agreement that provides a strategy for the long-term protection of wetlands and associated uplands habitats needed by waterfowl and other migratory birds in North America. In December 2002, Congress reauthorized appropriations for the Act through Fiscal Year (FY) 2007, reflecting its and the public's support of the Act's goals. Congress increased the appropriation authorization to \$55 million in 2003, with \$5 million increases to occur annually until FY 2007, when the appropriation cap will be \$75 million. However, actual annual allocations have usually only hovered in the \$40-\$45 million range.

**Current Status:** The North American Wetlands Conservation Act established the Council to review and recommend project proposals to the Migratory Bird Conservation Commission, which has the authority to approve funding for projects. The Council comprises nine members. The Director of the US Fish and Wildlife Service and the Executive Director of the National Fish and Wildlife Foundation have permanent seats on the Council. Four state representatives (one from each flyway) and three non-governmental organization representatives (each from a different non-governmental organization that is an active partner in wetlands conservation) are appointed by the Secretary of the Interior. These members serve 3-year terms. Non-voting *ex officio* members are also appointed by the Secretary. There are currently two *ex officio* members representing non-governmental organizations and one each representing Canada and Mexico. The Council meets three times each year.

### **Partners for Fish and Wildlife**

**Authority:** Fish and Wildlife Coordination Act, 16 U.S.C. 661, 16 U.S.C. 742a-j, 16 U.S.C. 3741

### ***FY 2007 Budget Request (000's): TBD***

The Partners for Fish and Wildlife is a voluntary partnership program that assists private landowners restore wetlands and other important fish and wildlife habitat on their own lands. Given that it is a voluntary program, the success of it and the level of effort relies on the private landowner's willingness to accept technical and financial assistance from the Service. Projects for FY 2006 have not been selected and, therefore, future amounts to be expended and planned actions are undetermined at this time.

**Project Description:** The Partners for Fish and Wildlife Program (PFW) is the primary mechanism for delivering voluntary on-the-ground habitat improvement projects on private lands for the benefit of federal trust species. The program provides technical and financial assistance to landowners to help meet the habitat needs of federal trust species on private lands. Program projects may include improving habitat for any or all of the following: migratory bird species; anadromous fish species of special concern to the Service; endangered, threatened, or candidate species; species proposed for listing; and other declining or imperiled species.

**Current Status:** In FY07, the program will be developing "focus areas" within the state of California. The program will focus on the restoration and enhancement of wetlands, riparian areas, native uplands, and habitat for threatened and endangered species, and the elimination of invasive plant species. This program also will provide technical assistance to landowners who seek assistance with restoration or enhancement projects.

Since 1990 the PFW in California has restored or enhanced 78,139 acres of wetland habitat, 8,653 acres of upland habitat, 1,998 acres of riparian habitat, and 284 miles of riparian habitat on 687 properties. The PFW in California is currently in the process of developing focus areas. These focus areas will enable the program to focus its efforts in critical watersheds and threatened landscapes.

***Key Milestones:***

- Restore 50,000 acres of wetlands in the Central Valley and Northeast Plateau.
- Restore 250 miles of riparian habitat in the Central Valley, Pacific Coast, and Sierra Nevada Ranges.
- Restore 50 miles of instream habitat for salmon and steelhead in Central Valley and Pacific Coast waterways.
- Benefit the federally threatened California red-legged frog by improving ranchers' livestock ponds.
- Provide technical assistance to 150 landowners annually.

## **SCIENCE**

### **Interagency Ecological Program**

**Authority:** Fish and Wildlife Coordination Act, 16 U.S.C. 661-667(e)

**FY 2007 Budget Request (000's):** \$231

**Project Description:** The Interagency Ecological Program (IEP) is an estuarine ecological monitoring and special study collaboration by 3 state and 6 federal agencies with management and/or regulatory responsibilities in the San Francisco Estuary and Sacramento-San Joaquin Delta, California. The 3 state agencies are the California Department of Fish and Game (DFG), California Department of Water Resource (DWR), and California State Water Resource Control Board (SWRCB); the federal agencies include US Fish and Wildlife Service (USFWS), US Bureau of Reclamation (USBR), US National Ocean and Atmospheric Administration Fisheries (NOAA Fisheries), US Geological Survey (USGS), US Environmental Protection Agency (USEPA), and the US Army Corps of Engineer (USACE). The purpose of this collaboration is to gather in an efficient, coordinated and cooperative way the ecological information required by the agencies to effectively carry out their management and regulatory responsibilities.

The goals and objectives to address the mission of the IEP are (1) describe the status and trends of aquatic ecological factors of interest in the estuary; (2) develop an understanding of environmental factors that influence observed aquatic ecological status

and trends; (3) use knowledge of the previous information in a collaboration process to support natural resource planning, management, and regulatory activities in the estuary; (4) continually reassess and enhance long-term monitoring and research activities that demonstrate scientific excellence; (5) provide scientific information about the estuary that is accurate, accessible, reliable, and timely; and (6) respond to management needs in a timely fashion.

**Current Status:** The Interagency Ecological Program is comprised of long-term monitoring, water operations monitoring and special studies. The IEP is committed to conducting the mandated monitoring studies required by NOAA Fisheries and FWS biological opinions and SWRCB Water Rights Decision D-1641. There is also a commitment to continue providing the “real-time” data needed to make water operation decisions.

Work to be done includes:

- Coded-wire tagging of all CNFH late-fall run production to ensure proper race identification during subsequent recovery of fish at Delta export facilities and in juvenile and adult sampling programs. Recovery of tagged late-fall run fish is also part of the spring-run recovery plan.
- Mitten crab monitoring and reporting. This element will operate the online reporting system for mitten crab collections and observations and will implement summer surveys of mitten crab distribution and abundance. The main part of this element will be funded and staffed by USFWS nonnative invasive species program personnel with some sharing of resources from IEP.
- Sampling juvenile salmon and other delta fishes with midwater trawls, Kodiak trawls and beach seines in the delta that supports or provides information useful to water project operations. Distribution and abundance of juvenile salmonids are required by NOAA Fisheries OCAP BO for winter-run and spring-run Chinook salmon.
- A program of trawling and seining at key sites in the lower rivers, Delta and estuary targeting all races of juvenile salmon emigrating through, and rearing in the Delta. The program is multipurpose, providing information on the timing of emigration extent of rearing in the Delta, and annual production. Although this effort focuses on juvenile salmon, information is also collected on all other delta fishes. Distribution and abundance of juvenile salmonids are required by NOAA Fisheries OCAP BO for winter-run and spring-run Chinook salmon.

**Key Milestones:**

- Sample salmon, steelhead trout and delta smelt distribution and abundance as well as water quality measurements, and provide data on a “real-time” basis, to make day-to-day water operations decisions during Data Assessment Team (DAT) conference calls and Water Operations Management Team (WOMT) meetings.

- Continue genetic analyses to differentiate Chinook salmon runs, purchase of coded-wire-tags and support the collection and processing of tagged fish for survival estimates.
- Continue monitoring and reporting of mitten crab abundance and distribution