

## Work Plan for Fiscal Year 2005

I. Program Title. Land Retirement Program (LRP), CVPIA Section 3408(h)

II. Responsible Entities.

	Agency	Staff Name	Role
Lead	USBR	Robert May	Program Manager
Co-Lead	FWS	Bea Olsen	FWS -Agency Representative

The overall objectives for the Land Retirement Program are outlined in CVPIA, Section 3408(h) and are described in the Land Retirement Program Interim Guidelines, which were revised in Nov. 1998, by the Interagency Land Retirement Team (LRT), with input from a stakeholder's group and other State and Federal Agencies.

III. Program Objectives for FY 2005.

Evaluate impacts of retiring 15,000 acres of land from irrigated agriculture. Interior will continue to purchase land from willing sellers within the Demonstration Project areas up to the targeted 15,000 acres and remove it from irrigated agriculture. Pursuant to the Service's Endangered Species Act Biological Opinion September 1999 for the CVPIA Land Retirement Program Demonstration Project, five years of monitoring were necessary to evaluate the potential risks to biota and the physical impacts upon groundwater level and quality, soil chemistry. The Land Retirement Demonstration Project Report for Five Years (1999-2004) will be done in FY05 for the Fresno County lands. Two more years of monitoring in Tulare and Kings Counties are still required. Monitoring of selenium levels in vegetation and wildlife will continue.

For FY05, the Land Retirement Program will focus on completing acquisitions in the targeted 8000-acre project area. Offers have been accepted and appraisals done for 785 acres that should have all realty transactions completed in 2005. Approximately 900 acres still need to be acquired and actions will be taken such that they can be acquired in FY06, should no additional funds become available in FY05.

A variety of methods, including direct seeding, drilling, imprinting and nursery transplants are being used and evaluated to determine effective, safe and economical means for upland habitat rehabilitation, which may aid in the recovery of threatened and endangered species in the San Joaquin Valley. For FY05, Bureau of Land Management will continue restoration activities that emphasize previously successful techniques, while still other methods are being tested. Acres of annual restoration will expand to 250 acres per year. Native seed grow-out with a grower partner will continue

on 2 acres, concentrating on Alkali Sacaton and Indian Rice Grass. A burn plan for an 80-acre burn will be written and executed. Another 30 miles (about 40 acres) of hedgerows will be planted with native shrub seed and additional acres will be restored along existing roads and canals. Seed test plots on sandy loam soils will be set up similar to plots established in 2001 on heavy clay soils.

Site maintenance at the Tranquillity site will continue around the buffers and study plots, as well as roads, ditches and other infrastructure. Site restoration will include a diversified upland habitat unit as well as weed control trials discussed below.

At the native plant nursery near Tranquillity, ESRP will continue to maintain, enhance and develop mechanization technologies for plants that lend themselves to mechanical production and harvest, as well as augment the additional species collected in 2004. Some seed beds will be re-worked and a more efficient irrigation system installed. Native seed collected and grown at the nursery will be part of wildlife plantings done in cooperation with the Westside Resource Conservation District. The mechanized seed cleaning equipment installed in FY04 will be utilized to clean seed for restoration trials and wildlife units. Seed augmentation for selected species will be done at the Plant Materials Center at Lockeford, CA in cooperation with the USDA-NRCS (second year of a two-year contract).

The focus of ancillary restoration research trials in FY05 will be to test weed control measures and planting sequences that have not been done to date. These techniques may be adapted and transferred to other upland habitat restoration efforts. Technology transfer will occur via field seminars, tours, publications, website development, economic development opportunities and presentations. A grant applied for at the U.S. Bureau of Reclamation Science and Technology Program will enable the LRT to bring expertise utilized in other restoration efforts nationwide to help solve establishment issues in the San Joaquin Valley. A second grant application to this program will be applied to soil and water technology.

Water not needed for habitat restoration will be made available for other CVPIA program uses. Many of the Demonstration Project acquisitions in the Alpaugh and Atwell Island Districts come with productive deepwater wells that could be pumped to lower water tables in drainage-impaired areas, and to provide additional sources of water supplies for CVPIA uses.

The Demonstration Project is exploring the use of supplemental and pre-irrigation water to promote faster and more effective habitat restoration. A standard of 2-acre foot-per-acre has been estimated as being adequate to promote the growth of native, drought-tolerant shrubs, forbs and grasses, and some dryland crops, while not contributing to drainage problems. Irrigation will be required to establish the diversified upland habitat units. Acquired water may be used to provide water to refuges, or it may be transferred or reassigned to other CVPIA users.

#### IV. Status of the Program.

In 1997, Interior solicited offers for voluntary land retirement where willing sellers, within the eligible area, submitted proposals. A total of 80 applications have been received as of September 1, 2002, from willing sellers amounting to approximately 55,000 acres. Applications are accepted on a continuous basis. Response has exceeded available funding every year.

In November 1999, Interior established the CVPIA Land Retirement Demonstration Project. This project is 15,000 acres in size, with approximately 7,000 acres targeted for retirement in western Fresno County (Tranquillity project area), 1,600 acres in southeastern Kings County and approximately 6,400 acres in southwestern Tulare County (Atwell Island project area). The demonstration project monitors and evaluates the impacts of land retirement upon groundwater levels, groundwater and surface water quality, soil chemistry and biota. Various techniques are being evaluated to determine the most effective and economical means to rehabilitate safe upland habitat that may aid in the recovery of threatened and endangered species in the San Joaquin Valley.

In 1999, the Demonstration Project Habitat Restoration study plots were laid out on 800 acres of the 2,090 acres acquired in Fresno County. The Atwell Island project site began in the fall of 2001. At both study sites four treatments were replicated five times in a randomized block design. The treatments consisted of: seeding and planting of native plants; installing earthen berms to create micro- topographic contours; seeding and planting native species and installing contours; and control. Each 10-acre plot is located in the center of a 40-acre block with the 30-acre remainder buffer planted in barley to isolate the plots. At Atwell Island, plot size was reduced to 2.5 acres within 10-acre plots.

Data collected includes percent plant cover, productivity, survivorship, invertebrate species richness and abundance, and reptile species richness and abundance. Additional data are collected to examine winter raptor use and the presence of other wildlife species. Tissue samples are taken and analyzed to estimate the potential amount of bioaccumulation of contaminants, notably selenium, throughout the site. This contaminant level will be used to determine if further investigation is necessary to evaluate the effects of land restoration on the abundance, diversity and health of wildlife using the restored habitat.

Preliminary results from 1999-2002 at the Tranquillity Demonstration Project site support the concept of a declining shallow groundwater table in response to land retirement. The shallow groundwater beneath the project sites consists of highly saline water with high concentrations of selenium and boron. Soils consist primarily of poorly drained clays and loams with elevated levels of salt, selenium and boron when compared to other soils in the San Joaquin Valley.

Land retirement has led to increased abundance and diversity of wildlife. Increased invertebrate species and abundance have included parasites and predators of

agricultural pests as well as beneficial pollinators. Bird species diversity and abundance increased across all treatments immediately following restoration efforts and included special status species. Land retirement has not resulted in increased levels of bio-accumulated Selenium. Selenium concentrations in vegetation, invertebrates and mammals have not changed significantly over the study period to date. All Selenium levels measured are considered below concentrations of concern to EPA and USFWS at both study sites.

Despite the obstacles of restoring retired agricultural lands, localized areas have responded well to the re-introduction of native vegetation. At the Westlands site, results indicate that seeding by imprinting is a successful and cost-effective method of planting a variety of native plant species. At the Atwell Island site, hedgerows with native plant species have been established. A palate of San Joaquin Valley wildlife species, including a kit fox, has been observed using the hedgerows just established in January 2003.

#### V. **FY 2004 Accomplishments.**

In fiscal year 2004, the CVPIA LRP, at both Tranquillity and Atwell Island, continued acquisition, research, restoration efforts and site management, reports, and outreach. Work was accomplished at Tranquillity with an Endangered Species Recovery Program (ESRP) contract and with the Interagency Agreement with the Bureau of Land Management at Atwell Island.

##### **Acquisitions:**

Acquisitions for the Land Retirement Demonstration Site at Atwell Island continue to target completing transactions to reach the goal of 8000 acres. During FY04, 30 acres were purchased and an additional 154 acres are expected to close by end of FY04 (total 184 acres). Other acquisition actions began with the acceptance of a DOI offer for a 625 acre parcel and for an appraisal currently underway on a 160 acre parcel.

##### **Research:**

1. Data gathering for the 5-year Habitat Restoration Study, designed to determine the effects of habitat restoration on wildlife on 20, 10-acre plots at the Tranquillity site, was completed.
2. All data were entered into databases, proofed, edited and a suite of exploratory data analysis and graphing accomplished for selected data sets covering the 5 consecutive years of the study (1999 to 2004).
3. Habitat rehabilitation techniques in replicated trials were conducted on 64 plots on 15 acres at the Tranquillity site and inter-planted on 20 acres of alfalfa at Atwell Island. The Land Retirement Team, ESRP and BLM staff assisted Dr.

Ken Lair, USBR Restoration Botanist, to design, establish, and sample plots containing 8 native plant species planted with a variety of techniques.

4. Awarded \$56,500 from Reclamations Science & Technology Program to conduct research on the effects of Land Retirement on project groundwater and soil.
5. Continued monitoring soil and groundwater conditions at both sites.
6. Purchased monitoring equipment to gather weather data at Atwell Island site to be integrated into California Irrigation Management Information System (CIMIS).
7. Developed conceptual model of groundwater flow at Tranquillity site in preparation for numerical model simulating groundwater response to land retirement.

#### **Restoration Efforts & Site Management:**

The San Joaquin Valley native plant nursery at Tranquillity expanded to 5 acres and increased from 34 to 64 species (13 shrubs, 30 annual herbs, 19 perennial herbs, 2 perennial grasses). Collections of 91 species from 78 locations were made on 314 collecting trips. Additionally, 8 species were established in 0.5 acre plots using mechanized production and harvesting methods. Mechanized seed cleaning equipment was purchased and operations established. Large quantities of seeds were collected under contracts. An established 1.5 acre contract grow-out area for Alkali Sacaton and Indian Rice Grass continued.

Research on seed delivery, plant propagation, and seed production methods continued with the USDA Plant Material Center in Lockeford, CA. Seed augmentation of three targeted species will be done in FY05.

Restoration and site management activities at both sites were accomplished with cooperating farmers. Barley was planted at Tranquillity on 600 acres in buffers that isolate the study plots from one another, inhibit the establishment of weeds, and reduce erosion and dust. Additionally, barley was planted on 120 acres that was previously used as research trials, so that new trials can be installed in FY05. On 80 acres, a new cultivar of barley (UC937) was planted that UC Davis developed for use on high saline soils.

At Atwell Island, 32 miles (80 acres) of hedgerows were established with native shrubs. On 20 acres of range land, seeding occurred after treatment with propane flamer. Iodine bush was seeded on 7 acres of a sump (former evaporation pond). A mix of native annuals and perennials was planted on an additional 20 acres. A hydro-planter installed 100 tree cuttings in riparian-canal areas along with 25 potted trees and shrubs.

At Atwell Island a diversified upland habitat unit was established as a wildlife farming demonstration area with 15 acres of native shrub plantings interspersed with 20 acres of crops, 5 acres each of vetch, milo maze, wheat, and safflower. The results of this wildlife habitat planting laid the groundwork for a Cooperative Agreement with the Westside Resource Conservation District to implement five units in Fresno County in FY05.

The existing 20 acres wetland at Atwell Island was managed for wintering waterfowl. Cooperation with the USDA-NRCS of Visalia led to establishment of a wetland for breeding season waterfowl and shorebirds on an adjacent 10 acre.

### **Reports & Implementation Plan for Upland Species Recovery on Retired Agricultural Lands**

The Land Retirement Demonstration Project Fourth Annual Report was published in January 2004. A draft of the final five year analysis and report will be available in October 2004. Several manuscripts for publication are currently being written and will be in draft form by October 2004. An electronic copy of this report has been posted to Endangered Species Recovery Program=s website at <http://esrpweb.csustan.edu/publications/pdf/lrdp/2002ar>

Development of an Implementation Plan for recovery of upland species on restored retired agricultural lands began in FY04. Discussions with listed species experts were held and form the basis for discussions of how to best utilize the techniques and native plant species of the CVPIA LRP for upland habitat restoration on retired agricultural lands. Such restoration could contribute, possibly substantially, to upland species recovery.

### **Outreach:**

Presentations and posters were given at a number of forums in FY04. These included: Annual Statewide Department of Water Resources Workshop, Drainage and Salinity Annual Conference, American Society of Mammalogists, California Native Plant Society, Society of Ecological Restoration and the Raptor Research Foundation.

Outreach to the local high school science classes and science clubs introduced a workshop on land retirement. A volunteer day at the native plant nursery was held in observance of Earth Day. Two CSU Fresno graduate students are conducting research at the Tranquillity site to investigate native plant pollinators' populations and seed delivery methods for 7 native plant species. At Atwell Island a CSU Fresno graduate student is studying of post-harvest flooding effects.

Participation in the Tulare Lake Basin Working Group fostered working partnerships with Sequoia Riverlands Trust; Tulare County Audubon Society; USDA-NRCS; and USDI Fish and Wildlife Service Refuges and Joint Venture Program.

A presentation of the CVPIA Land Retirement Program was given to researchers Dr. Werner 'Erik' Klohn and Dr. Hans-Wilhelm Windhorst of the University of Vechta Germany. These visitors have studied and traveled the California water and agricultural regions for the past 15 years. They are collecting and updating their data for a forthcoming book (their third on the subject). Their work is sponsored by the Institute of Spatial Analysis and Planning (ISPA) in areas of intensive agriculture at the University of Vechta.

## VI. Tasks, Costs, Schedules and Deliverables

### A. Narrative Explanation of Tasks

#### 1. Program Management.

This program is managed as an interagency team with members from USBR, FWS & BLM. USBR provides program leadership, budgets and administration (0.7 FTE). USBR Hydrologist (1.0 FTE) provides expertise on the physical impacts of land retirement research studies and additional staff support from the USBR Sacramento Regional Office. FWS and BLM team members provide agency coordination, land management planning and project management expertise. Program priorities are set jointly, as a team.

The FWS cost estimate covers the FWS team member's salary (1 FTE) and additional staff support from the FWS Sacramento Field Office. The BLM cost estimate covers the BLM Coordinator in the BLM Bakersfield Area Office. Additional costs for BLM are included in the Interagency Agreement between BLM and USBR, which provides for additional BLM support for land acquisition, restoration and land management activities. BLM is providing additional support in the way of equipment, office space, supplies and personnel at BLM's cost. BLM is not charging any overhead to this program.

#### 2. Demonstration Project (Principal Investigators: Endangered Species Recovery Program (ESRP)) Contract for the Tranquillity site and BLM for the Atwell Island site)

Produce the Five-Year Land Retirement Demonstration Project Report (1999-2004) for the data collected at the site in Fresno County, pursuant to the Service's ESA BO September 1999 for the CVPIA Land Retirement Program Demonstration Project. This work will be accomplished and reviewed principally by Curt Uptain, ESRP Director of Land Retirement and Dr. Nur Ritter, Botanist. Land Retirement Team Hydrologist Stephen Lee and USBR Denver Technical Services Center Joe Brummer will evaluate the physical impacts of land retirement upon groundwater level and quality, soil chemistry and potential risks to biota; and develop effective and economic techniques to restore retired lands to upland wildlife habitat.

3. Land Acquisition & Restoration (BLM)  
In FY05, finalize the acquisition process for a 625 acre parcel of land and its associated water within the Atwell Island Water District for which an offer was accepted in FY04. Complete the appraisal and acquisition for an additional 160 acre parcel. Continue the fourth year of the five-year study at the Atwell Island Project Site. Continue restoration activities at the Atwell Island Project Site, emphasizing previously successful techniques, while developing and testing new methods. Expand restoration acreage from the current 150 acres per year to 250 acres. Work will be accomplished under the direction of Dr. Stephen Laymon.
4. Denver Technical Services Assistance  
Utilize the USBR Denver Technical Services Center Restoration Ecologist Dr. Ken Lair to expedite refinement and continuance of research on: species adaptation, planting methods, weed control, plant selection, propagation, seed increase, plant materials supply for landscape-scale application, and interagency development for commercial retail supply. Additionally, Joe Brummer, soil scientist at the Technical Service Center will collect and analyze soil chemistry data from the Land Retirement Demonstration Project, especially salinity, selenium and boron.
5. Groundwater & Soil Monitoring & Aerial Photography  
Groundwater, Surface Water and Soil Samples will be collected and analyzed for constituents of concern as part of the Land Retirement Demonstration Project. Soil samples taken in FY04 will be analyzed and findings will be reported in the FY05 monitoring report. Aerial Photography to assess changes since lands were retired is included.
6. GIS Mapping Analysis  
Develop GIS databases and maps for analysis of data collected in the past years and current one of the Land Retirement Demonstration Project.
8. Groundwater Modeling  
Groundwater Modeling Numerical simulation of groundwater flow and salt transport in the shallow groundwater at the Tranquillity Site will be performed in FY 05. The Hydrosphere groundwater model will be utilized to simulate groundwater flow and advective transport of solutes at the demonstration project site.



**Additional Funding Needs**

Land Acquisition - Atwell Island Water District (AIWD):

The current budget precludes acquisition of approximately 900 acres of land and associated water within the boundaries of the Land Retirement Demonstration Project in the Atwell Island Water District. This acquisition would complete the targeted acreage for the Land Retirement Demonstration Project in the Atwell Island Water District. Estimated Cost: \$1,350,000 (assumes average cost of \$1500/acre for land and water).

## B. Schedule and Deliverables

#	Task	Start Date	Complete Date	Deliverable
1.	Program Management	10/01/04	09/30/05	Annual Work Plan, Program Administration, Public Outreach
1.1	USBR Program Manager	10/01/04	09/30/05	USBR Agency Program Manager (0.7 FTE) to integrate all Project efforts, resources, public outreach, and responsibilities.
1.2	FWS Staff	10/01/04	09/30/05	FWS Agency Coordination (1.25 FTE), Demonstration Project Coordination & Management, Public Outreach, Sacramento staff support. Implementation Plan preparation.
1.3	USBR Staff, Hydrologist	10/01/04	09/30/05	USBR Agency Hydrologist (1.0 FTE), Manages & reports well monitoring program, groundwater data and modeling programs, and physical impact(s) of all restoration projects.
2.	Demonstration Project Coordination with ESRP	10/01/04	09/30/05	Monthly Progress, Annual Budget & Schedule, Five Year Report for Tranquillity Site. Database management & updates. On-Site management.
3.	Land Acquisition (BLM) & Restoration (BLM)	10/01/04	09/30/05	Real property acquisition (processing, appraisal, title co., cadastral review) & restoration & monitoring activities.
4.	Denver TSC	10/01/04	09/30/05	Research to assist in site restoration assessment & technology transfer methods. Coordinate with seed industry and NRCS Plant Materials Research Program. Soil & water analysis.
5.	Groundwater & Soil Monitoring & Aerial Photography	2/01/04	9/30/05	Collect & analyze Groundwater, Surface Water & Soil Samples. Analyze FY2004 soil samples & report findings in the FY2005 monitoring report. Includes Aerial Photography.
6.	Groundwater Modeling	10/01/04	9/30/05	Perform numerical simulation of groundwater flow & salt transport in the shallow groundwater at the Tranquillity Site.
7.	GIS Mapping and Analysis	10/01/04	9/30/05	Simulate groundwater flow and advective transport of solutes using Hydrosphere Groundwater Model. GIS Map Products and Analysis

**Schedule and Deliverables - FY 05 Additional Funding Needs.**

#	Task	Start	Complete	Deliverable
1	Land Acquisition (AIWD)	10/01/04	9/30/05	Real Property Acquisition (+/- 900 acres), Atwell Island Water District
2	ESRP	10/01/04	9/30/05	Monitoring and Trials in Fresno County Results and Reports
3	BLM Restoration	10/01/04	9/30/05	Approximately half of the acres to be monitored and restored.
4	Denver TSC	10/01/04	9/30/05	Planting trials established this fall will not be measured so that experiment is totally lost.

**Explanatory Notes:**

1. Land Acquisition - Atwell Island Water District (AIWD): The current budget precludes acquisition of approximately 900 acres of land and associated water within the boundaries of the Land Retirement Demonstration Project in the Atwell Island Water District. This acquisition would complete the targeted acreage for the Land Retirement Demonstration Project in the Atwell Island Water District. **Estimated Cost: \$1,350,000** (assumes average cost of \$1500/acre for land and water). Task 3.

2. Endangered Species Recovery Program: The work required for FY2005 will have to be accomplished with \$100,000 and by stretching carryover funds from FY 2004 through December 31, 2005. An obligation from FY 2006 will have to cover work necessary from January 1, 2006. Task 2  
**Estimated loss: \$375,000.**

3. Restoration at Atwell Island- BLM: Targeted restoration acres that will not be treated or monitored because of funds reduction. Task 3. **Estimated Cost: \$111,000.**

4. Denver TSC: Loss of monitoring of annual trials already installed means planting efforts spent to date would have to be repeated another year, in addition to monitoring costs. Information is critical for determining cost effective means to control weeds in San Joaquin Valley upland restoration efforts. Task 4. **Estimated Cost: \$10,000.**

**C. Summary of Program Costs and Funding Sources.**

#	Task	Total Cost	Funding Sources	
			RF	W&RR
1	Program Management Costs (USBR, FWS, BLM)			
1.1	USBR	\$378,507	\$378,000	\$ 0.00
1.2	FWS	\$75,000	\$175,000	\$ 0.00
2	Demonstration Proj. (ESRP)	\$475,000	\$100,000	\$ 0.00
3	Land Acquisition/BLM-I Agreement	\$300,000	\$189,000	\$ 0.00
4	USBR Denver Technical Service Center	\$90,000	\$80,000	
5	Groundwater & Soil Monitoring & Aerial Photography	\$63,000	\$63,000	
6	Groundwater Modeling	\$25,000	\$5,000	
7	GIS mapping & analysis	\$10,000	\$10,000	
<b>Total Program Budget</b>		<b>\$1,500,000</b>	<b>\$1,000,000</b>	<b>\$0.00</b>

**Explanatory Notes:**

1. Land Acquisition - Atwell Island Water District (AIWD): The current budget precludes acquisition of approximately 900 acres of land and associated water within the boundaries of the Land Retirement Demonstration Project in the Atwell Island Water District. This acquisition would complete the targeted acreage for the Land Retirement Demonstration Project in the Atwell Island Water District. **Estimated Cost: \$1,350,000** (assumes average cost of \$1500/acre for land and water). Task 3.

2. Endangered Species Recovery Program: The work required for FY2005 will have to be accomplished with \$100,000 and by stretching carryover funds from FY 2004 through December 31, 2005. An obligation from FY 2006 will have to cover work necessary from January 1, 2006. Task 2  
**Estimated loss: \$375,000.**

3. Restoration at Atwell Island- BLM: Targeted restoration acres that will not be treated or monitored because of funds reduction. Task 3. **Estimated Cost: \$111,000.**

4. Denver TSC: Loss of monitoring of annual trials already installed means planting efforts spent to date would have to be repeated another year, in addition to monitoring costs. Information is critical for determining cost effective means to control weeds in San Joaquin Valley upland restoration efforts. Task 4. **Estimated Cost: \$10,000.**

**Program Costs and Funding Sources - Additional Out-year Funding Needs.**

#	Task	Total Cost	Funding Sources	
			RF	W&RR
1	ESRP	\$375,000	\$375,000	\$ 0
2	Land Acquisition (AIWD) BLM	\$1,350,000	\$1,350,000	\$ 0
3	Restoration BLM	\$1,500,000	\$1,500,000	\$ 0
<b>Total Program Budget</b>		<b>\$3,225,000</b>	<b>\$3,225,000</b>	<b>\$ 0</b>

**Explanatory Notes:**

1. The current budget precludes acquisition of approximately 900 acres of land and associated water within the boundaries of the Land Retirement Demonstration Project in the Atwell Island Water District. This acquisition would complete the targeted acreage for the Land Retirement Demonstration Project in the Atwell Island Water District. **Estimated Cost: \$1,350,000** (assumes average cost of \$1500/acre for land and water). Task 3.

2. Endangered Species Recovery Program: The work required for FY2005 will have to be accomplished by stretching carryover funds from FY 2004 through December 31, 2005. An obligation from FY 2006 will have to cover work necessary from January 1, 2006. Task 2  
**Estimated loss: \$375,000.**

3. Restoration at Atwell Island- BLM: Targeted restoration acres will not be treated or monitored because of funds reduction. Task 2. **Estimated Cost: \$300,000 per year for 5 year Interagency Agreement (\$1,500,000 total).**

**D. CVPIA Program Budget**

	Task	Direct Salary and Benefits Costs	Contracts Costs	Miscellaneous Costs	Administrative Costs	Total Costs
1	Program Manage Costs (USBR,FWS,BLM)					
1.1	USBR	\$190,633	\$1,000	\$17,625	\$168,742	\$378,000
1.2	FWS	\$128,856		\$16,507	\$29,637	\$175,000
2	Demo Project ESRP					\$100,000
3	Land Acquisition/BLM -IA					\$189,000
4	USBR Denver TSC		\$80,000			\$80,000
5	GW & Soil Monitoring/aerial photography		\$63,000			\$63,000
6	Groundwater Modeling		\$5,000			\$5,000
7	GIS mapping		\$10,000			\$10,000
	<b>Total by Category</b>	<b>\$319,489</b>	<b>\$448,000</b>	<b>\$34,132</b>	<b>\$198,379</b>	<b>\$1,000,000</b>

**Explanatory Notes:**

1. Land Acquisition - Atwell Island Water District (AIWD): The current budget precludes acquisition of approximately 900 acres of land and associated water within the boundaries of the Land Retirement Demonstration Project in the Atwell Island Water District. This acquisition would complete the targeted acreage for the Land Retirement Demonstration Project in the Atwell Island Water District. **Estimated Cost: \$1,350,000** (assumes average cost of \$1500/acre for land and water). Task 3.
2. Endangered Species Recovery Program: The work required for FY2005 will have to be accomplished with \$100,000 and by stretching carryover funds from FY 2004 through December 31, 2005. An obligation from FY 2006 will have to cover work necessary from January 1, 2006. Task 2  
**Estimated loss: \$375,000.**
3. Restoration at Atwell Island- BLM: Targeted restoration acres that will not be treated or monitored because of funds reduction. Task 3. **Estimated Cost: \$111,000.**

4. Denver TSC: Loss of monitoring of annual trials already installed means planting efforts spent to date would have to be repeated another year, in addition to monitoring costs. Information is critical for determining cost effective means to control weeds in San Joaquin Valley upland restoration efforts. Task 4. **Estimated Cost: \$10,000.**

## **VII. Future Years Commitments/Actions**

In the immediate future, the five years of monitoring the Land Retirement Demonstration Project will be completed on the BLM managed portion of the project, as will be done for the Tranquillity site in FY05. A final report will be issued. The remaining acres within the Atwell Island Water District will be purchased, restoration activities and technology transfer will continue and partnerships will increase and broaden within the communities of concerned San Joaquin Valley resource managers.

Funding reductions below \$1,500,000 jeopardize continuity and the ability to implement the Land Retirement Demonstration Project (LRDP) on existing retired agricultural land. Development and transfer of ecological restoration technologies for other retired agricultural lands in the San Joaquin Valley would similarly be jeopardized at funding levels below \$1,500,000. Potential actions that would negatively be impacted are the process of developing habitat restoration plans, land management plans, ongoing habitat recovery for threatened and endangered species, and research on cost effective land management and restoration techniques for retired lands.

Funding at \$5,000,000 will allow continued demonstration research, restoration technology transfer and increased availability of desired native plant seed, partnership development and acquisition of approximately 900 acres of drainage impacted lands in the western San Joaquin Valley. Incremental funding at \$3,000,000 will allow continued demonstration research, restoration technology transfer, and allow acquisition of approximately 400 acres of drainage impacted land in the western San Joaquin Valley.

For more information on the CVPIA Land Retirement Program and to obtain an application, you may contact the Land Retirement Program, Bureau of Reclamation, 1243 N Street, Fresno, CA 93721-1813, or telephone (559) 487-5137/5104/5286.