# Work Plan for Fiscal Year 2003

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

II. Responsible Entities.

| | Agency | Staff Name | Role |
|---|---|---|---|
| Lead | USBR | Robert May | Program Manager |
| | FWS | Bea Olsen | FWS -Agency Representative |
| | BLM | Tracy Rowland | BLM-Agency Representative |
| | USBR | Stephen Lee | Hydrologist - Team Member |

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 2003. The program objectives for FY03 are to continue the FY02 objectives with the Land Retirement Demonstration Project and are more fully described below.

**A. 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 (Fresno, Tulare & Kings Counties), up to the targeted 15,000 acres and remove it from irrigated agriculture. Retired lands will be monitored and at the end of the five-year demonstration project a written report evaluating the physical impacts of land retirement upon groundwater level and quality, soil chemistry and potential risks to biota will be published. A science advisory panel will be convened in FY03 to evaluate data collection, analyses, and preliminary results from the demonstration project. The fourth annual progress reports of findings will be published in FY03.

**B. Restore Upland Habitat.** Various techniques are being used and evaluated via rigorous scientific study to determine the most effective and economical means to rehabilitate upland habitat that is safe for use by wildlife, and which may aid in the recovery of threatened and endangered species in the San Joaquin Valley. A target of 640 acres has been set for restoration of upland habitat in FY03. Additional acres will

be restored using linear hedgerows along existing roads and canals. Restoration will be accomplished using a variety of methods, including direct seeding, imprinting and nursery transplants. Additional trials will be conducted using different materials and techniques for site preparation, and weed and pest control to determine the most effective and economical means to restore habitat. Data gathered from this demonstration project may be adapted and used successfully in other parts of the state to restore habitat.

**C. Make acquired water available for other CVPIA purposes**. Water not needed for habitat restoration will be made available for other CVPIA program uses. The Demonstration Project is exploring potential water uses, such as partnerships with other water users and methods such as water transfers, partial reassignment and utilization of other sources such as groundwater. 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. A study is underway to determine the safe water yield from the aquifer to estimate an average annual water supply that could be made available for CVPIA purposes.

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.

Partnerships will be explored with other CVPIA programs, such as the San Joaquin River Riparian Habitat Restoration Program, to make acquired water available to other CVPIA programs to share project costs and meet multiple CVPIA objectives. 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 (WWD 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.

The specific purposes of the Demonstration Project are to determine if the current criteria for selection of lands in the Land Retirement Program Interim Guidelines are adequate to accomplish the mission of the Program: to reduce drainage, improve water quality in the San Joaquin River, establish wildlife habitat; and determine which habitat rehabilitation techniques and land management options will work best under various scenarios.

In 1999, a Habitat Restoration Study was implemented on 800 acres of the 2,090 acres acquired, to date, in the Westlands Site, as a demonstration project. The Atwell Island project site was implemented in the fall of 2001. The study consists of four treatments replicated five times in a randomized block design. The treatments consisted of 1) seeding and planting of native plants, 2) installing earthen berms to create micro-topographic contours, 3) seeding and planting native species and installing contours and 4) no treatment (control). Each plot is located in the center of a 40-acre block and the remainder of the block is planted with a barley buffer to isolate the plots. In the Alpaugh site, plot size will be 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 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 the Demonstration Project (1999-2002) Westlands 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. Recorded at the Demonstration Project site in Fresno were 17 special status avian species, 3 of which successfully nested in the 2002 season. Populations of small mammals increased

substantially on retired lands. Three mammalian special status species were found on restored land at Atwell Island. 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.

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 species have been established. Ancillary trials to clarify actions that can ensure future large-scale successes are being established for 2003. These trials will test the effects of various measures to control weeds, including herbicides, irrigation, mowing, and burning.

For more details on the Land Retirement Demonstration Project please see the website: *www.mp.usbr.gov/cvpia/* (go to Projects section).

## V. FY 2002 Accomplishments.

1. Acquired 2,130 acres of land and associated water from willing sellers in Atwell Island Water District (Atwell Island Demonstration Project Site). Total acres acquired to date in Atwell Island: 6,158.

2. Tested various habitat rehabilitation techniques and continued monitoring results and adapting management actions on all retired lands.

3. Continued to monitor ground water levels and ground water quality in accordance with the Quality Assurance Project Plan at the Westlands Demonstration Project site. Results to date indicate a declining shallow water table in response to land retirement. Began monitoring groundwater and soil conditions at the Atwell Island Project site.

4. Published third annual Land Retirement Demonstration Project Report documenting results of physical and biological monitoring programs, and adaptive management of retired lands. An electronic copy of this report has been posted to Reclamation=s website at www.mp.usbr.gov/cvpia/ (go to Projects section).

5. Public Outreach Activities included:

   Our research partner, the Endangered Species Recovery Program (ESRP) and the LRT gave papers on the results to date of the Demonstration Project at the Western Section Conference on Restoration Ecology sponsored by The Wildlife Society. Additionally, ESRP gave papers for the SERCAL conference in Arizona.

The LRT spoke with the Kings County Farm Bureau about the program and the Demonstration Project and attended the Tulare County Farm Show.

The LRT spoke with the Westside Resource Conservation District Board of Directors about the program and the Demonstration Project.

6. Established Ancillary Trials in response to adaptive management questions raised that would test alternate planting methods, alternate native seed mixes and cover crop seed mixes.

7. Identified a reference site on a willing private landowner-s property that may provide answers to many of the management and scientific questions raised at the Demonstration Project sites.

8. Established research plots at the Atwell Island project site and initiated restoration work on over 200 acres.

## 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 Reclamation, the Service, and Bureau of Land Management (BLM). Reclamation provides program leadership, budgets and administration (1 FTE). Reclamation hydrologist (0.8 FTE) provides expertise on the physical impacts of land retirement research studies and additional staff support from the Reclamation 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 Service cost estimate covers the Service team member's salary (1 FTE) and additional staff support (0.25 FTE) from the Service Sacramento Field Office. The BLM cost estimate covers the BLM team member's salary (0.5) located in the SCCAO. Additional costs for BLM are included in the Interagency Agreement between BLM and Reclamation, 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 Contract for the WWD site and BLM on the Atwell Island site) Continue the fourth year of five-year demonstration program in Westlands Water District (WWD), and implement the second year of a five-year study at

the Atwell Island Project Site in the Alpaugh Irrigation District (AID) and Atwell Island Water Districts (AIWD). Goals of the studies are to determine effectiveness of LRP Selection Criteria, evaluate effects of retiring land and develop effective and economic techniques to rehabilitate retired lands to suitable upland wildlife habitat. The demonstration program will also include a method for tracking progress and assessing actual results. This method will provide a means for determining future land retirement needs and identifying actions needed to accomplish long-term land retirement objectives.

3. Land Acquisition/ (BLM)
   Acquire approximately 800 acres of land in FY 2003 and its associated water within the Atwell Island Water District for the purposes of the Land Retirement Demonstration Project. Appraisals will be conducted by DOI-qualified appraisers to determine the fair market value of additional properties to be acquired and establish the basis of negotiation and/or acquisition of the properties. The services of a title and escrow company will be utilized.
4. Science Advisory Panel
   Retain the services of subject matter experts in groundwater hydrology, soils, botany and environmental toxicology to provide expert advice on data collection and analysis issues for the land retirement demonstration project. The science advisory panel will provide recommendations regarding data collection and ecological risk assessment issues for the land retirement demonstration project.
5. Ground water monitoring/Environmental Site Assessments
   Collect groundwater, surface water and soil samples and analyze for constituents of concern as part of the Land Retirement Demonstration Project. Report findings in the annual monitoring report. Environmental Site Assessments (ESA) will be conducted on all properties purchased for land retirement prior to closure of escrow. The assessments will be completed in conformance with federal standards (ASTM Standard E 1527-97 and Departmental Policy).
6. Case file processing and GIS mapping
   The Land Retirement Team processes case files of acquired lands in accordance with federal land acquisition standards, including preparing title evidence, and locating properties on the landscape utilizing all available survey records and markers and creating GIS databases and maps.
7. Land Acquisition in Westlands Water District (WWD)
   Acquire land and associated water from previously identified property acquisition list, if funding is available. See "Future Years Commitments/Actions" for additional funds needed to complete acquisition of the 15,000-acre Demonstration Project.
8. Land Acquisition processing - WWD
   Appraisals will be conducted by DOI-qualified appraisers to determine the fair market value of additional properties to be acquired and establish the basis of negotiation and/or acquisition of the properties. Regional realty review and final

processing of case files for land USBR is acquiring.

**Additional Funding Needs (FY03)**

1. **Land Acquisition - Westlands Water District (WWD)**
   Acquire approximately 2800 acres of land within the boundaries of the land retirement demonstration project in Westlands Water District. Estimated Cost: $7,280,000. (assumes average cost of $2600/acre for land and water)

2. **Land Acquisition - Atwell Island Water District (AIWD)**
   Acquire approximately 1840 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 target acreage for the project. Estimated Cost: $2,760,000 (assumes average cost of $1500/acre for land and water)

**B.** Schedule and Deliverables

| | Task | Start Date | Complete Date | Deliverable |
|---|---|---|---|---|
| 1 | Program Management | 10/01/02 | 09/30/03 | Annual Work Plan, Program Administration, Public Outreach |
| 1.1 | USBR Program Manager | 10/01/02 | 09/30/03 | USBR Agency Program Manager (1 FTE) to integrate efforts, resources, Public Outreach, and responsibilities on all projects. |
| 1.2 | FWS Staff | 10/01/02 | 09/30/03 | FWS Agency Coordination (1.25 FTE), Demonstration Project Study Coordination (Project Management), Public Outreach, Sacramento staff support. |
| 1.3 | BLM Staff | 10/01/02 | 09/30/03 | BLM Agency Coordination (0.5 FTE), Lead Realty Specialist for all LRP land acquisitions, Project Management, Public Outreach |
| 1.4 | USBR Staff, Hydrologist | 10/01/02 | 09/30/03 | USBR Agency Hydrologist (0.8FTE), Manages the well monitoring program, groundwater data and modeling programs, and physical impact(s) of all restoration projects. |
| 2 | Demonstration Project Coordination with ESRP | 10/01/02 | 09/30/03 | Monthly Progress, Annual Budget & Schedule, Annual Report, Data archive |
| 3 | Land Acquisition (BLM) | 10/01/02 | 09/30/03 | Real property acquisition (processing, appraisal, title co., cadastral review, GIS) |
| 4 | Science Advisory Panel | 10/01/02 | 12/01/03 | Report documenting recommendations |
| 5 | Groundwater Monitoring | 12/01/02 | 9/30/03 | Groundwater data, Phase I Environmental Site Assessment Reports |
| 6 | Case Files/ GIS (FRO 400) | 10/01/02 | 9/30/03 | Real Property Acquisition Case Files, GIS Map Products (Fresno BOR staff) |
| 7 | Land Acquisition (WWD) | 6/01/02 | 9/30/03 | Real property Acquisition, USBR is acquiring agency |
| 8 | Land Appraisals (WWD) | 10/01/02 | 6/01/03 | Appraisal reports, Title Company Services, Regional office case file review and final case processing |

Explanatory Notes: Land acquisition requires an interdisciplinary, interoffice effort. Appraisals are coordinated by the acquiring agency's regional office appraisal staff. Case files are prepared by Land Retirement Team Staff and transmitted to acquiring agency's realty staff for review and final processing which includes insuring title standards are met, coordination with regional solicitor's office for preliminary and final title opinions and processing payment requests.

## 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 | $ 338,256 | $ 338,256 | $ |
| 1.2 | FWS | $ 177,450 | $ 177,450 | $ |
| 1.3 | BLM | $ 13,320 | $ 13,320 | $ |
| 2 | Demonstration Proj. (ESRP) | $ 850,000 | $ 850,000 | $ |
| 3 | Land Acquisition/BLM-I Agreement | $ 200,000 | $ 200,000 | |
| 4 | Science Advisory Panel | $ 80,000 | $ 80,000 | |
| 5 | Water Samples/monitoring/hazmat | $ 172,460 | $ 172,460 | |
| 6 | Case file processing and GIS mapping | $ 30,000 | $ 30,000 | |
| 7 | Land Acquisition in WWD | $ 688,514 | $ 688,514 | |
| 8 | Land Acquisition processing - WWD | $ 50,000 | $ 50,000 | |
| **Total Program Budget** | | **$ 2,600,000** | **$ 2,600,000** | **$** |

Explanatory Notes: Land Retirement Program team has contracted with the Endangered Species Recovery Program (ESRP) to conduct various research activities in the operation of the Demonstration Project in the amount of $850,000 under task 2. See Section VI, A2.

Land Retirement Program team has entered into a five (5) year Inter-agency cooperative agreement with BLM to acquire land and conduct restoration activities and monitoring in the Atwell Island Water District for the purposes of the Land Retirement Demonstration Project. See Section VI, A3.

## Schedule and Deliverables - FY 03 Additional Funding Needs.

| # | Task | Start | Complete | Deliverable |
|---|---|---|---|---|
| 1 | Land Acquisition (WWD) | 10/01/02 | 9/30/03 | Real Property Acquisition (+/- 2800 acres), Westlands Water District |

Explanatory Notes: One additional property owner in Westland Water District has planned to sell property to the land retirement program during FY03. However, due to changes in future funding requests, land retirement will need additional funding to purchase this property this FY. Land retirement will need an additional $7.3 million to purchase this property.

## 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 | $ 177,506 | $ 0 | $ 17,500 | $ 143,250 | **$ 338,256** |
| 1.2 | FWS | $ 147,875 | $ 0 | $ 0 | $ 29,575 | **$ 177,450** |
| 1.3 | BLM | $ 13,320 | $ 0 | $ 0 | $ 0 | **$ 13,320** |
| 2 | Demonstration Project (ESRP) | $ 0 | $ 850,000 | $ 0 | $ 0 | **$ 850,000** |
| 3 | Land Acquisition/BLM IA Agreement | $ 0 | $ 200,000 | $ 0 | $ 0 | **$ 200,000** |
| 4 | Science Advisory Panel | $ 0 | $ 80,000 | $ 0 | $ 0 | **$ 80,000** |
| 5 | Water Samples/Monitoring/Hazmat | $ 85,000 | $ 87,460 | $ 0 | $ 0 | **$ 172,460** |
| 6 | Case File processing and GIS mapping | $ 20,000 | $ 10,000 | $ 0 | $ 0 | **$ 30,000** |
| 7 | Land Acquisition in WWD | $ 0 | $ 688,514 | $ 0 | $ 0 | **$ 688,514** |
| 8 | Land Acquisition processing in WWD | $ 26,824 | $ 0 | $ 0 | $ 23,176 | **$ 50,000** |
| | **Total by Category** | **$ 470,525** | **$1,915,974** | **$ 17,500** | **$196,001** | **$ 2,600,000** |
| | | | | | | |

Explanatory Notes:
There are currently more acres of land to retire than money available. ESRP's budget needs are $850,000 for FY03 for demonstration project activities.

## VII. Future Years Commitments/Actions. :

Continue to acquire monitoring data from the 15,000-acre demonstration project for three to five years. To acquire approximately 6800 acres remaining in the demonstration project area, additional funding in the amount of **$21,653,000** will be needed during FY04 thru FY06. Once the total 15,000-acre demonstration project area is acquired, budget needs for the next three to five years will be approximately four (4) million dollars per year for operation and maintenance of the research project and management of public lands. The majority of this O&M cost is for resource monitoring and laboratory analysis work. Work will continue on completing environmental documentation for a larger continuing land retirement program to acquire additional drainage impaired agricultural land. Funding in the amount of $40 million per year for 5 to 6 years will be required.