

# Draft CVPIA Fiscal Year 2013 Annual Work Plan

June 18, 2012

## Program Title:

*Land Retirement Program CVPIA Section 3408(h)*

## Responsible Entities:

Staff Name	Agency	Role
<i>Stephen Lee</i>	<i>USBR</i>	<i>Lead</i>
<i>Vacant</i>	<i>USBLM</i>	<i>Federal Partner</i>

## Program Goals and Objectives for FY 2013

- **Retire drainage impaired agricultural land.** The program goal is to retire (remove from irrigated agriculture) 15,000 acres of drainage impaired land by 2014 for the Land Retirement Demonstration Project (LRDP). Drainage impaired farmland is acquired from willing sellers and converted to restored upland wildlife habitat. The LRDP land acquisition goal included 7,000 acres in Westlands Water District (Tranquillity Site) and 8,000 acres in the Tulare Basin (Atwell Island Site). The CVPIA land acquisition goal at the Tranquillity site has been superseded by the Westlands Water District program, which has retired approximately 100,000 acres from irrigated agriculture. Interior has acquired over 7,200 acres at the Atwell Island site to date. The Land Retirement Program continues to pursue land acquisition at the Atwell Island LRDP site. The land acquisition goal is to acquire an additional 700 acres by 2014 at the Atwell Island LRDP site.
- **Reduce agricultural drainage volume** by retiring drainage impaired farmland in the San Joaquin Valley from irrigated agriculture and changing the land use to restored upland habitat. During 2012 the Land Retirement Demonstration Project (LRDP) reduced the production of agricultural drainage on retired demonstration project lands by over 3,900 acre-ft. Since 1995, the program has reduced the production of poor quality agricultural drainage on LRDP lands by over 49,000 acre-ft. The goal for 2013 is to reduce the volume of agricultural drainage produced on LRDP lands by an additional 3,900 acre-ft.
- **Demonstrate upland wildlife habitat restoration** on retired agricultural lands in the San Joaquin Valley. Restoration of retired LRDP lands has led to increased wildlife diversity and abundance at the LRDP sites. Since 1998 the Land Retirement Program (LRP) has restored over 6,400 acres of habitat on retired lands, meeting the goal of 400 acres annually. More than 70% of the habitat restored by the Bureau of Land Management (BLM) at the Atwell Island LRDP site has met or exceeded the threshold for success, meaning that there is 15% native plant cover and 1% native shrub cover on restored parcels. A number of sensitive San Joaquin Valley species such as kit fox, loggerheaded shrikes, burrowing owls and Tipton Kangaroo rats have been observed using restored LRDP lands. The goal for 2013 is to restore an additional 400 acres of upland wildlife habitat at the Atwell Island LRDP site.

## **Supporting Documents for the above stated goals and objectives.**

**1. CVPIA language:** Title 3408 (h) (1) The Secretary is authorized to purchase from willing sellers land and associated water rights and other property interests identified in paragraph (h) (2)...and to target such purchases to areas deemed most beneficial to the overall purchase program, including the purposes of this title and agricultural wastewater management activities developed pursuant to recommendations specific to water conservation, drainage source reduction, and land retirement contained in the San Joaquin Valley Drainage Report (September 1990).

**2. The San Joaquin Valley Drainage Program (September 1990)** which recommended retirement of 75,000 acres in the San Joaquin Valley by 2040.

**3. The CVPIA Record of Decision (ROD)** committed to completion and use of a 15,000 acre Land Retirement Demonstration Study that would “provide guidance for future implementation of the overall retirement program, better providing for its adaptive management” and resulting in a more effective and efficient overall retirement program.

**4.** The program prepared an action-specific **Land Retirement Demonstration Project NEPA document (Environmental Assessment – Finding of No Significant Impact, EA/FONSI, 1999)** and consulted with the FWS for endangered species.

**5. The Demonstration Project’s Biological Opinion** (U.S. Fish and Wildlife Service, 1999 Formal Section 7 Consultation) provided metrics for monitoring and reporting for the Land Retirement Demonstration Project. Reports documenting five years of monitoring at two demonstration project sites in the Westlands Water District and the Atwell Island Water District were completed in 2005 and 2009, respectively.

**6. The San Joaquin Valley Recovery Plan for Upland Species 1998** had performance criteria for retired agricultural lands in the San Joaquin Valley.

## ***Status of the Program***

### **1. Land Retirement Program Objectives and Initiation of LRDP**

The FWS Biological Opinion required that land retirement impacts be monitored before a large-scale program was implemented. An EA for the 15,000 acre Land Retirement Demonstration Project (LRDP) was approved in 1999 to study the physical and biological impacts. The ROD for the CVPIA PEIS further committed to completion and use of the demonstration project that would “provide guidance for future implementation of the overall retirement program, better providing for its adaptive management and resulting in a more effective and efficient overall retirement program”.

## **2. Land Retirement Program Actions**

In 1997, Interior via the CVPIA Land Retirement Program (LRP) solicited offers for voluntary land retirement from willing sellers, within the drainage-impacted area. Over 80 applications amounting to 55,000 acres were received by 2002, far exceeding available funding. In 1999, the CVPIA Land Retirement Demonstration Project was established pursuant to the Biological Opinion. This 15,000 acres project had provisions for 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). From 1993 to date, the CVPIA Land Retirement Program has acquired over 9,300 acres. The Atwell Island Project Site is managed by BLM; Reclamation manages the Tranquillity site.

## **3. Demonstration Project Establishment**

The Land Retirement Demonstration Project (LRDP) was established at Tranquillity in the Westlands Water District and at Atwell Island Water District in the Tulare Basin. The metrics, derived from the 1999 Biological Opinion performance criteria, included selenium contaminant levels in biota and other parameters such as groundwater levels and water quality.

**4. Monitoring Demonstrates Benefits of Land Retirement.** Demonstration Project results clearly show that retiring land from irrigated agriculture has drainage reduction and biological benefits. The shallow groundwater table at the LRDP sites declined in response to land retirement by 1 to 2 feet per year. This result is important as the shallow groundwater beneath the project sites is highly saline water with high concentrations of selenium and boron. The decline insures that any wildlife contact is highly unlikely. Land retirement has not resulted in increased levels of bio-accumulated selenium. Selenium concentrations in vegetation, invertebrates and mammals did not change significantly over the five year study period and are below concentrations of concern to EPA and USFWS at both study sites. Land retirement led to increased diversity of wildlife. Bird species diversity and abundance increased across all treatments immediately following restoration efforts and included special status species. A number of sensitive San Joaquin Valley wildlife species, including kit fox, loggerhead shrikes, burrowing owls and Tipton kangaroo rats have been observed using restored sites at the Atwell Island LRDP. At the Tranquillity site, a unique San Joaquin Valley native plant nursery with over 100 species was established to demonstrate the ability to amplify limited San Joaquin Valley native seed stock, help determine species for restoration strategies and develop cultivation methods. The USDA Natural Resources Conservation Service Plant Materials Center conducted research to grow some of these with mechanical means. Additional trials focused on weed competition control, the major challenge in successful upland habitat restoration.

## **Adaptive Management**

- **Retired lands have been successfully restored** with native plant communities to enhance wildlife resources. Adaptive management techniques have been used to overcome the following challenges to site restoration: Limited reference sites to guide restoration, altered site hydrology, effects of past agricultural practices (i.e. depleted native seed bank), competitive pressure from non-native invasive species due to a large amount of weed seed in the seed bank, low mean annual precipitation and extremely variable precipitation patterns, constraining site conditions such as variable soil salinity, highly motile soils, and low topographic variability. BLM has developed performance criteria for restoration success using a limited number of existing native sites as a reference.
- **Restoration Success Criteria:** Sites with greater than 15% native vegetation cover and greater than 1% native shrub cover after restoration are deemed successful.
- The following **recommendations for site restoration** are a direct result of the adaptive management of the restoration program. (1) Fresh locally collected seed should be used for restoration planting, (2) Moderate to high seeding rates (25 lbs. per acre or more) should be used. Use enough seed so the native plants you are planting will dominate the site and suppress the weed species, (3) Develop planting designs based on soil types, (4) Plant in fall prior to the first heavy late fall rains, (5) Use standard agricultural site preparation and planting techniques: fallow fields are burned and planted with a range drill, agricultural fields are disked several times and planted with the Trillion broadcast seeder, (6) Irrigate the restoration planting only if the rainfall totals for the year are more than 20% below average, (7) Use existing local reference sites to define success criteria for restoration.

Table 1. FY2013 Proposed Activities and Costs

CVPIA Section 3408 (h), Land Retirement Program

	3408 (h) Requested Funding for Fiscal Year 2013				
	Restoration Fund	Water and Related Resources	State Cash	State In-Kind	Total All Sources
<b>Total Funding</b>	\$500,000	\$50,000	\$0	\$0	\$550,000
Reclamation	\$500,000	\$50,000			\$550,000
Service	\$0	\$0			\$0
CA DFG			\$0	\$0	\$0
CA DWR			\$0	\$0	\$0

1.1 Program Management												
AWP Activity Number	Activity Name	Activity Description	Agency		Program Performance Goal	FY2013 Projected Performance	3408 (h) Requested Funding for Fiscal Year 2013					
			Name	Fractional FTE			Restoration Fund	Water and Related Resources	State Cash	State In-Kind	Total All Sources	
1.1.1	Program Lead	BOR is lead agency responsible for program execution (CA#'s H37-1205-6030, A30-1205-6030)	BOR	0.50			\$50,000	\$50,000			\$100,000	
							<b>Sub-Total for Program Management, FY2013</b>					
							Restoration Fund	Water and Related Resources	State Cash	State In-Kind	Total All Sources	
							<i>Subtotal Funding</i>	\$50,000	\$50,000	\$0	\$0	\$100,000
							Reclamation	\$50,000	\$50,000			\$100,000
							Service	\$0	\$0			\$0
							CA DFG			\$0	\$0	\$0
							CA DWR			\$0	\$0	\$0

3.1 Land or Water Acquisition or Water Conveyance												
AWP Activity Number	Activity	Activity Name & Description	Agency		Program Performance Goal	FY2013 Projected Performance	3408 (h) Requested Funding for Fiscal Year 2013					
			Name	Fractional FTE			Restoration Fund	Water and Related Resources	State Cash	State In-Kind	Total All Sources	
3.1.1	Atwell Island, Acquire and Restore Land	Land is acquired from willing sellers and restored to upland wildlife habitat through an inter-agency agreement with BLM. Restoration Goal is 400 acres per year. Land acquisition goal is 8,000 acres (CA# H37-1205-6030).	BOR		Restore 400 ac of retired land	Restore 400 acres	\$450,000	\$0			\$450,000	
							<b>Total for Land or Water Acquisition or Water Conveyance, FY2013</b>					
							Restoration Fund	Water and Related Resources	State Cash	State In-Kind	Total All Sources	
							<i>Subtotal Funding</i>	\$450,000	\$0	\$0	\$0	\$450,000
							Reclamation	\$450,000	\$0			\$450,000
							Service	\$0	\$0			\$0
							CA DFG			\$0	\$0	\$0
							CA DWR			\$0	\$0	\$0

Table 2 – Intentionally left blank