Draft CVPIA Fiscal Year 2012 Annual Work Plan

June 20, 2011

Program Title:

Land Retirement Program CVPIA Section 3408(h)

Responsible Entities:

Staff Name	Agency	Role
Stephen Lee	*USBR*	*Lead*
Vacant	*USBLM*	*Federal Partner*

Program Goals and Objectives for FY 2012

- ***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 The CVPIA land acquisition goal at the Tranquillity site has been superceded by the Westlands Water District program, which has retired approximately 100,000 acres from irrigated agriculture. Interior has acquired 7,247 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 670 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 2011 the Land Retirement Demonstration Project (LRDP) reduced the production of agricultural drainage on retired demonstration project lands by over 3,700 acre-ft. Since 1995, the program has reduced the production of poor quality agricultural drainage on LRDP lands by over 34,800 acre-ft. The goal for 2012 is to reduce the volume of agricultural drainage produced on LRDP lands by an additional 3,700 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 5,600 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 2012 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 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 (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 Joquin 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 9203 acres. The Atwell Island Project Site is managed by BLM; Reclamation manages the Tranquility 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 physical parameters such as groundwater levels, water quality and soil chemistry.

4. Monitoring Demonstrates Benefits of Land Retirement. Demonstration Project results clearly show that retiring land from irrigated agriculture has physical 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. Selenium in the top foot of soil decreased over 5 years. At Atwell Island where BLM has done restoration activities, a number of sensitive San Joaquin Valley wildlife species, including kit fox, loggerhead shrikes, burrowing owls and Tipton kangaroo rats have been observed using these restored areas. 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 cost efficient cultivation. 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. FY2012 Activities and Costs

	CVPIA Section: 3408 (h)
	CVPIA Program: Land Retirement

	2012 Requested Funding					
	State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Total Funding	$0	$0	$500,000	$49,000	$0	$549,000
Reclamation			$500,000	$49,000	$0	$549,000
Service			$0	$0	$0	$0
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other	$0	$0			$0	$0

AWP Activity Number	Type of Activity	# of FTE's	Activity Name & Description	Agency	NMFS OCAP RPA#	Performance Metric	Performance Target	2012 Requested Funding: State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
1.1	**Program Management**												
1.1.1		0.50	BOR Lead is Stephen Lee: Responsible for all program management activities.	BOR	-	h: Atwell Island land retirement	8,000	$0	$0	$100,000	$49,000	$0	$149,000
1.1.2		-	BLM Program Co-Lead is Steve Laymon: Project site coordinator for the LRDP Atwell Island Site responsible for land restoration and acquisition.	BLM	-	h: Atwell Island land retirement	8,000	$0	$0	$0	$0	$0	$0

	Anticipated Funding: State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$100,000	$49,000	$0	$149,000
Reclamation			$100,000	$49,000	$0	$149,000
Service			$0	$0	$0	$0
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

*** List other funding source here:** None

AWP Activity Number	Type of Activity	# of FTE's	Activity Name & Description	Agency	NMFS OCAP RPA#	Performance Metric	Performance Target	2012 Requested Funding: State Cash	State In-Kind	Restoration Fund	Water and Related Resources	Other Sources*	Total All Sources
1.4	**Restoration Actions**												
1.4.1		-	BLM Bakersfield office is responsible for acquiring land from willing sellers and restoring retired land to upland wildlife habitat.	BOR	-	h: Restore retired lands (annually)	400 acres	$0	$0	$400,000	$0	$0	$400,000

	Anticipated Funding: State Cash	State In-Kind	Restoration Fund	Water and Related Resources	State or Other Sources*	Total All Sources
Subtotal Funding	$0	$0	$400,000	$0	$0	$400,000
Reclamation			$400,000	$0	$0	$400,000
Service			$0	$0	$0	$0
CA DFG	$0	$0			$0	$0
CA DWR	$0	$0			$0	$0
Other*	$0	$0			$0	$0

*** List other funding source here:** None

Table 2. Three-Year Budget Plan FY 2013 – 2015

Table 2. Three-Year Funding Plan FY 2013 – 2015 **($ amounts in thousands)**						
FY Year	**Description of Activities**	**Funding Needs**				
		RF	**W&RR**	**Other**	**DFG**	**DWR**
2013	1.1 Program Management 1.4 Restoration Actions – Acquire and Restore retired land **Total**	100 400 500				
2014	1.1 Program Management 1.4 Restoration Actions – Acquire and Restore retired land **Total**	100 400 500				
2015	**Total**	0				

Note: The FY 2013 – 2015 Budget Plan provides estimates of capability only. The amounts are displayed are those that might be reasonably appropriated each year. These figures do not reflect the future Congressional Appropriations process. All of these estimates will be adjusted pending appropriations and annual Restoration Fund collections are realized.