

Appendix 1. CVPIA Land Retirement Program Chronology

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Introduction

This appendix provides an overview of the activities undertaken by the CVPIA Land Retirement Team (LRT) and the Endangered Species Recovery Program (ESRP) during the course of the Land Retirement Demonstration Project (LRDP) 1996-2005. Topics are presented in the calendar year they occurred. Some activities were repeated annually and are only briefly noted in Appendix 1. Appendix 3 contains more details of research and site activities that may only be mentioned in Appendix 1.

For each year included in this chronology, five sub-sections are described (except for 1996). Program Administration deals with personnel, key meetings, laws, planning, and documentation. Land Acquisition lists actions involved in retiring drainage impacted lands. Research and Monitoring lists actions related to the measurements of physical and biological impacts due to land retirement. The Restoration and Site Management sub-section describes and lists actions debated, planned, or taken on the Tranquillity and Atwell Island Demonstration site lands. Throughout the course of the project, members of the Land Retirement Team and Endangered Species Recovery Program staff have participated in, or taken the lead on, a variety of outreach activities. The final subsection for each year is a listing of these activities.

Year 1996 Accomplishments

Program Administration

In this year, the Bureau of Reclamation (Reclamation), Fish and Wildlife Service (FWS) and Bureau of Land Management (BLM) agreed to cooperatively accomplish the Land Retirement Program (LRP) authorized by the Central Valley Project Improvement Act (CVPIA) enacted by Congress in 1992 as Public Law 102-575. The LRP Office was established in Reclamation's South-Central California Area Office in Fresno. Robert May was hired as the Program Manager. The Fish and Wildlife Service (FWS) Land Retirement Team representative John Castellanos started working for James McKeivitt in Sacramento. The Bureau of Land Management (BLM) team member Tracy Rowland reported for duty. A CVPIA Land Retirement Reclamation/FWS Monthly Coordination Meeting was established to discuss the program status and coordination between Reclamation

and FWS. The Interim Program Guidelines drafted with Reclamation, BLM, FWS and DWR and state agencies, water districts, environmental groups, farmers, and academic representatives.

Outreach

Public information meetings were held in January 1996 to explain the program. The Draft Interim Program Guidelines released to public. Co-written with Department of Water Resources, they were mailed to water districts, farmers, federal and state agencies, county governments, and other interested parties.

Year 1997 Accomplishments

Program Administration

The Reclamation team member hydrologist Stephen Lee reported for duty, as did the FWS team member Bea Olsen, who replaced the representative from the Sacramento FWS office.

The Interim Guidelines and Selection Criteria were revised to add selenium ppm in soil criteria. A Memorandum of Understanding (MOU) between Westlands Water District (WWD) and Department of the Interior (DOI) was drafted regarding LRP partnership for program implementation. A DOI MOU was drafted that defined roles, responsibilities and implementation procedures for LRP. Regional and State Directors for Reclamation, FWS, and BLM signed the MOU for three agencies to implement and manage CVPIA Land Retirement Program. A third MOU between federal, state, and local agencies was drafted that outlined the shared vision and solidified support for the land retirement program.

The National Environmental Policy Act (NEPA) strategy defined the Prepared Scope of Work for a NEPA contract bid request. A Scope of Work was prepared and the contracting process was begun to acquire the services of a consulting firm to prepare an environmental assessment (EA) for the acquisition of selected parcels. Applications for parcels by Sumner-Peck were dropped due to the Settlement Agreement for the Sumner-Peck lawsuit.

A CALFED grant proposal was submitted for the Panoche Creek Riparian Habitat and Flood Control corridor project, which seeks to retire farmlands along a creek channel and to reestablish a meander zone for the stream. This widening and restructuring of the stream channel should reduce flooding and lessen the transport of contaminants, such as selenium, to the San Joaquin River.

Land Acquisition

The generalized criteria to address drainage, fish and wildlife enhancement, and acquisition of water for other purposes of CVPIA and select parcels for acquisition was developed by an interagency, multi-disciplinary team of both state and federal representatives. DOI began to solicit offers for voluntary land retirement from willing sellers within the eligible area. The LRT received 80

applications starting in 1997 and by September 2002 had approximately 22,258 hectares [ha] (55,000 acres). Applications were accepted on a continuous basis. Selections for first round of program totaled 5,108 ha (12,623 acres). Landowner applicants were notified of their status within 60 days, in conformance with the Interim Guidelines.

A coordinated appraisal process was performed by Reclamation and title and escrow services obtained. Preliminary title reports were requested for selected parcels. A coordinated assignment of one regional DOI solicitor to review title reports, deeds, etc. for all three agencies' acquisitions was obtained. A series of meetings with applicants was held to explain process and timelines. The first appraisal scheduled.

Bids for hazmat surveys were taken and a contract awarded to BSK. The contractor also provided recommendations for cleanup of any such materials. A pre-work meeting with hazmat contractor was held and progress monitored. The Hazmat Environmental Site Assessment reports were completed for selected properties. Pre-work meetings with hazmat contractor were held and progress was monitored. Hazmat Environmental Site Assessment reports were completed for selected properties.

Research and Monitoring

UC Davis was contracted to perform a groundwater model study on Panoche Fan area. The Hydrologic Model of Land Retirement: Panoche Water District (UC Davis and D. Perkey Model) was completed.

A 5-year Demonstration Project at Tranquillity and Atwell Island Water District was initiated to determine LRP Selection Criteria effectiveness, evaluate physical effects of retiring land, and develop effective and economic methods to rehabilitate retired lands to suitable upland wildlife habitat. The demonstration program would track progress, assess actual results and provide a means to determine future land retirement needs and identify actions needed to accomplish long-term land retirement objectives.

Restoration and Site Management

Parcels submitted in drainage impacted areas were field reviewed for best matches to the Interim Guidelines Criteria.

Outreach

Public information meetings were held to present Interim Guidelines. Advertisements were published in major newspapers, water and drainage district newsletters, and agricultural publications throughout the project area, which led to receipt of 31 applications, covering approximately 10,927 ha (27,000 acres).

LRP presentations were given to Westside Resource Conservation District, Fresno Co. Public Works and Development Services Director and staff, and separately to County Supervisors in Fresno, Tulare, and Kings Counties. Additional LRP

presentations were given to LR subcommittee for San Joaquin Valley Drainage Implementation Plan, at an Open Houses for FWS Draft Recovery Plan for Upland Species in San Joaquin Valley and to the Region IV Director, California Department of Fish and Game.

Year 1998 Accomplishments

Program Administration

The Environmental Assessment for 526 ha (1,300 acres) of a Land Retirement Demonstration Project and a Draft Demonstration Study Plan were completed.

A scope of work was prepared and the contracting process begun to acquire the services of a consulting firm to prepare a programmatic environmental assessment for the land retirement program. The focus was the federal CVP service area on the western side of the San Joaquin Valley from the Sacramento-San Joaquin Delta on the north to the Tehachapi Mountains south of Bakersfield. A contractor was selected to prepare a Programmatic Environmental Assessment of the CVPIA Land Retirement Program. The Federal Register Notice of Intent (NOI) to prepare a Programmatic Environmental Assessment of the CVPIA Land Retirement Program, Vol. 63, No. 25/ Friday, February 6, 1998 was listed. A Internal Draft Programmatic Environmental Assessment was completed.

A Finding of No Significant Impact was signed for the Demonstration Project which included an agreement DOI made with WWD for the District to participate in the LRP. Terms of the cooperative agreement allowed the first 6,070 ha (15,000 acres) in WWD to be retired under the agreement. The amount paid would be fair market value, absent any appreciation due to the availability of Project water; WWD would pay the difference between that value and the full fair market value of the land up to \$1,150 per acre. WWD would be permitted to reallocate the CVP water to which the retired lands are entitled to other lands in the District, provided that they do not lie within the designated drainage-impacted region of the District. Finally, DOI would apply for an allocation from the District supplemental water supply to use in establishing vegetation on retired lands for upland habitat.

A Feasibility Study for Panoche-Silver Creek Corridor Project was begun. The Panoche- Silver Creek Corridor Project had the contractor analyze the feasibility and cost of developing a riparian habitat and flood control corridor using retired agricultural lands in the vicinity of Panoche Creek. At an option to the government, all NEPA scoping activities could be performed and an environmental assessment prepared.

Land Acquisition

Preliminary Title Reports were requested for 5,084 ha (12,563 acres) of drainage-impaired irrigated agricultural land for potential acquisition under the Land Retirement Program as outlined in the Interim Guidelines. From work that was

accomplished during 1997, appraisals on these acres were conducted for potential acquisition. Appraisals would determine the fair market value of these properties and establish the basis of negotiation and/or acquisition of the properties. Lands for acquisition under the Land Retirement Program were identified. More lands were available to be purchased and retired than funds would allow. A contractor conducted HAZMAT site-specific environmental compliance assessments on all properties prior to close of escrow.

Research and Monitoring

For the Westside San Joaquin Valley Groundwater Flow Model, a selected contractor utilized the groundwater flow model developed by Belitz and others to evaluate changes in groundwater flow due to land retirement in the central part of the western San Joaquin Valley, California.

At the University of California, Davis, researchers developed for a Water and Land Management Economic Study integrated hydrologic, soils, agricultural, and economic models for the area surrounding Firebaugh, California. The models quantified the economic, environmental, and social impacts of reductions in permanent surface water supply, reductions in lands irrigated, and reductions in selenium discharged from agricultural drainage in the study area.

A Groundwater Model (WESTSIM) developed by Reclamation modelers in Sacramento provided valuable information about the benefits and measurements of success of the program. This model provided a monitoring tool for sub-surface drainage reduction effects and potential groundwater table reduction.

The research design for monitoring biota on twenty 16 ha (40 acre) plots in the Demonstration Project in Fresno County was discussed with the Endangered Species Recovery Program Office, who will perform the research with CVPIA funds. ESRP performed Baseline Biological Survey on Demonstration Project lands in Fresno County. A Report of the Baseline Biological Survey was submitted to the LRT (See Appendix 2, 1999 Baseline Survey).

Groundwater monitoring was instituted in 1998 to detect the subsurface level of water and test the hypothesis that the water level would decline in the absence of surface watering (i.e., the irrigation of crops). Monitoring entailed collecting samples from 27 wells and sumps on the Tranquillity site.

Restoration and Site Management

Restoration funds were requested to start the conversion of the retired irrigated lands to suitable wildlife habitat. Lands were worked up and uniformly planted to a barley cover crop on approximately 493 ha (1,220 ac) at the Tranquillity site. This planting was done in the hopes of establishing relatively homogenous conditions for the Habitat Restoration Study (HRS) plots and to control weeds. ESRP contacted Ted St. John to discuss and demonstrate an imprinter and use of mychorriza.

Outreach

Public meetings were held to scope concerns regarding the Programmatic EA of the CVPIA Land Retirement Program. The LRT attended San Joaquin Valley Drainage Program Committee Meetings on Land Retirement.

Year 1999 Accomplishments

Program Accomplishments

A contractor was selected for preparation of a Programmatic EA of the CVPIA Land Retirement Program. The Expanded Demonstration Project Environmental Assessment for the 6,070 ha (15,000 acres) Expanded Demonstration Project area was completed. A Finding of No Significant Impact (FONSI) was signed by Reclamation, FWS, and BLM. A Biological Opinion as part of Formal Section 7 Consultation for the CVPIA Land Retirement Program Demonstration Project was received.

A notice was received from Fresno Agricultural Commissioner that sugar beets had to be controlled on 97 ha (240 acres) of LRDP lands.

Land Acquisition

The first appraisal was completed and the first parcel for the Demonstration Project (148 ha or 366 acres) acquired. A total of 666 ha (1,646 acres) in Fresno County was completed in FY 1999. Two appraisals in WWD were updated. About 24 ha (60 acres) of land were purchased from the WWD within the existing demonstration project area. Completed appraisals for purchase of 3,238 ha (8,000 acres) in Atwell Island WD (Tulare Lake Basin sub-area) were done. Phase 1 Environmental Site Assessments for approximately 2,428 ha (6,000 acres) of agricultural properties were done. The Assessments were completed in conformance with ASTM Standard E 1527-97 and Departmental Policy. Incoming applications continued to be evaluated and land acquired from a pool of applicants previously received.

Research and Monitoring

The Feasibility Study for the Panoche-Silver Creek Corridor Project was completed. The project proved to be too costly to provide significant flood control benefits without partnerships from other federal, state, or local partners. The U.S. Army Corps of Engineers (Corps) was identified as appropriate lead agency, but LRP may be a partner if project is ever implemented.

ESRP implemented the HRS on 324 ha (800 acres) of the 846 ha (2,090 acres) acquired in Fresno County (See Appendix 3.). The imprinter was built in Dos Palos. Surface manipulations were done to form berms. ESRP used seed collections and plant propagation on established plots and planted sterile barley to control weeds. A reference site was identified near the railroad in Firebaugh that is owned by Contra Costa Irrigation District has lots of iodine bush on it. Stuart

Hurlbert, statistician from San Diego State, reviewed the research design for the HRS. Soil scientists from UC Davis (Dr. Victor Claassen and David Kelley) and the Natural Resources Conservation Service (NRCS) (Kerry Arroues) visited the site to discuss soils and reference sites.

Weather data was collected by the California Irrigation Management System (CIMIS) weather station #105 located approximately 2.5 km (1.5 mi) west of the Tranquillity site and summarized in the final reports for each year. Data collected and summarized included precipitation, temperature, wind, and relative humidity.

The completed Quality Assurance Plan was implemented to monitor soil, groundwater, and surface water at the demonstration project site. A well network was installed to monitor groundwater levels and groundwater quality. Groundwater quality testing occurred on a quarterly basis during the first year of monitoring and annually thereafter. The initial surveys conducted in September and October of 1999 established baseline values for soil chemistry including salinity, selenium, boron, nitrate, pH, and major anions, cations, and nutrients. Unfiltered groundwater samples were analyzed for major ions, trace elements, isotopes, electrical conductivity, pH, temperature, and turbidity. Soil samples to establish baseline soil chemistry for demonstration project lands were collected.

The completed groundwater modeling study of various land retirement scenarios within the WWD will aid future land retirement planning within WWD.

Restoration and Site Management

Plugs of native species were grown and transplanted into “shrub islands.” The tillage question about not disturbing mycorrhizal development in buffers was discussed. Approximately 24 ha (60 ac) of the Tranquillity site was planted in safflower by the California Department of Fish and Game provided for an annual dove hunt. 22 hunters harvested 91 mourning doves (*Zenaida macroura*).

Outreach

1999 Partnerships were explored between the California State University system, local school districts, local tribal groups, and the proposed Central Valley Regional Historical Museum in Fresno, California, for the Tulare Lake artifacts and historical farm equipment held by sellers.

Year 2000 Accomplishments

Program Administration

The first Annual Monitoring Report on the Demonstration Project measuring physical and biological impacts from land retirement was published and distributed, as requested in the 1999 Biological Opinion.

An Interagency Agreement between Reclamation and BLM was developed that would allow BLM to directly acquire approximately 3,238 ha (8,000 acres) in the

Atwell Island study area that they manage. This 5-year agreement was for approximately \$12 million, most of which was for land acquisition.

Land Acquisition

1,071 ha (2,646 acres) were acquired in the Atwell Island project area: 639 ha (1,578.48 acres) in Tulare County and 432 ha (1,067.5 acres) in Kings County, of which 184 ha (455 acres) were paid for by Central Valley Project Conservation Program.

Phase 1 Environmental Site Assessments were completed for approximately 2,428 ha (6,000 acres) of agricultural properties. The Assessments were completed in conformance with ASTM Standard E 1527-97 and Departmental Policy. Environmental Site assessments will be conducted on all properties purchased for land retirement prior to closure of escrow.

Appraisals for parcels in WWD were conducted by DOI-qualified appraisers to determine the fair market value of additional properties to be acquired and to establish the basis of negotiation and/or acquisition of the properties. Land acquisitions required the services of a title company and escrow to be opened prior to county recording of deeds and title processing.

Processing case files of acquired lands in accordance with federal land acquisition standards included locating properties utilizing all available survey records and markers and creating Geographic Information System (GIS) databases and maps.

Research and Monitoring

Some 32 biotic surveys were conducted each year on the Tranquillity site. The majority of surveys were specific to the HRS plots; however, a number of site-wide surveys were also conducted (See Appendix 3). Trials installed included imprinting vs. Drilling of Native Seeds Trial in the fall of 2000 (See Appendix 3). ESRP was to set up data management of the photo points and other photos and provide LRT copies.

Monitoring wells were installed at the Atwell Island Demonstration Site to measure groundwater response as part of the Land Retirement Demonstration Project. Groundwater, surface water, and soil samples were collected and analyzed for constituents of concern as part of the Land Retirement Demonstration Project. The results were shown and discussed in the annual monitoring report. As with the monitoring of physical impacts at the Tranquillity site, data collected at the Atwell Island site were used to determine the effects, if any, of selenium on biota. The groundwater modeling study of various land retirement scenarios continued.

Restoration and Site Management

The small-scale imprinting and berm trial was installed at Tranquillity. Applying adaptive management, those techniques which appeared to be best suited for conditions at the Tranquillity site were adopted for the HRS. Additional trials

established tested Native Species, Cover Crops, and Mycorrhiza (See Appendix 3). Additionally, seed collecting at sites having remnant populations of native plants was initiated on a small scale (See Appendix 3). HRS plots at the Atwell Island site were established. Initial restoration efforts on more than 200 acres began.

The discussion of mowing techniques for HRS plots suggested that a strip down the center should be utilized instead of a circular pattern that would drive fauna to the center of the field. 8 ha (20 acres) of clover from the buffer area were offered to be harvested by neighbor to be used on idle land nearby. Discussions were held on the effects this could have on the buffers. Mowing would not impact much because the buffers were dried up already and mowing would act to remove another weed seed producer from the buffer. A field meeting with LRT, Karen, and Michelle resulted in agreement to mow *Atriplex* in buffer only (not plots) so that it does not spread tremendous numbers of seed over site. Consensus was that buffer areas need to be as weed free as possible to maintain the separation of experimental units and for aesthetic reasons—weedy areas look terrible to neighbors right now.

A meeting to discuss the serious weed problem at Tranquillity was held with Mike Williams of UCSB, Patrick Kelly, Michelle Selmon, and Woody Moise about serious weed problem. Sterile barley was found to reproduce and displayed recruitment of 50-75 percent cover in the plots. Weeds, such as *Sisymbrium irio* and *Senecio vulgare*, grew fast and threatened to swamp sprouting native seed. Native seed that sprouted 2.5-5 cm (1-2 inches) under the barley and London rocket did not do well unless the barley and weeds were controlled. All possible solutions, weed-eater, sheep, fire, aerial herbicide, or mowers, have problems.

Discussion of watering plots at Tranquillity and further plug planting of *Atriplex* and *Isocoma*. The thick cover of weeds, including sugar beets, was a problem. The suggestion was to disk areas slotted for a grass nursery where London rocket was seeding. Repeated disking was recommended to eliminate the weed seed base prior to restoration. The native grasses would be imprinted in the fall and a broadleaf herbicide used the next spring.

An unauthorized spraying at the Tranquillity site was experienced, most likely from the mosquito abatement district spraying. What the county's abatement program schedules are for the area needs to be known, as it affects personnel and experiments. This leads to talk of having research signs for the project site.

The Baseline Biological Surveys were scheduled for Atwell Island site. A field meeting with Michelle and Karen of ESRP, Bea and Larry Saslaw of BLM located HRS plots at Atwell Island.

First observation of false chinch bugs at site. "Brown stuff" noted that is sticky and appears shiny. Robust native plants were significantly affected. The "Low-till" situation may or may not have contributed to insect troubles, since false

chinch bugs are drawn to those areas in addition to being attracted to stressed, thin stands of barley and mustard species.

To maintain the integrity and consistency of the buffer, mowing of the annual Atriplex on about 101 ha (250 acres) was warranted. It was agreed to disk weeds prior to the fall planting. The barley in the 243 ha (600 acres) of buffers surrounding the HRS plots was thrashed and surface disked. Barley was reseeded where necessary. A hedgerow with low berms constructed along the edges of the seeded area to allow for flood irrigation was installed and planted with 11 native species. A previous marsh area was seeded at Tranquillity on 3.2 ha (8 ac) of LRDP land where a seasonal wetland had been created by agricultural runoff (See Appendix 3). Some native seed was collected. Despite rain delays, 65 ha (160 acres) were planted in Tranquillity with berms constructed in a more or less random configuration (See Appendix 3).

Outreach

Partnerships were explored between the California State University system, local school districts, local tribal groups, and the proposed Central Valley Regional Historical Museum in Fresno, California.

Plant ID handout for tours and others working in restoration was discussed. A Juvenile Dove Hunt had 45 hunters (quota was 50) on 24 ha (60 ac) of the Tranquillity site planted in safflower by the California Department of Fish and Game.

The LRT, in cooperation with FWS, staffed a booth at the Tulare County Farm Show which promoted the LRP and agricultural water incentive programs and SJV National Wildlife Refuges. Presentations were given by LRT, ESRP, and BLM to The Wildlife Society Western Section Conference in Visalia, California. A spring tour of the Fresno County site was given for a variety of stakeholders. Presentations were given at Kings County Farm Bureau and Westside Resource Conservation District Board of Directors.

Year 2001 Accomplishments

Program Administration

The 5-year Interagency Agreement between Reclamation and BLM began implementation to allow BLM to directly acquire approximately 3,238 ha (8,000 acres) in the Atwell Island study area.

John DiGregoria from Bitterroot Restoration worked on a CalFed project that would use Tranquillity to out-plant targeted species at sites in the SJV. Need to decide if want to let them use LRDP lands for some 9.1 m X 9.1 m (30 feet X 30 feet) plots. The grant did not go forward.

A request was received from Sacramento FWS Environmental Contaminants Division too late to look for bird eggs (blackbirds) for sampling for selenium. Perhaps a sample earlier in season can be done the next year by FWS, as ESRP does not have collecting permits for migratory bird eggs. The possibility was discussed of taking aerial photos to help define risks associated with water standing 30 days or greater, as identified in the Biological Opinion.

The second annual Land Retirement Demonstration Project Report documenting results of physical and biological monitoring programs, and adaptive management of retired lands was published and posted on the Reclamation website.

Land Acquisition

In Atwell Island Water District, 559.4 ha (1,382.22 acres) of land and associated water were acquired from willing sellers. A total of 1,630 ha (4,028.20 acres) was acquired to date. 862 ha (2,129.88 acres) were in escrow. In Fresno County, 180 ha (444 acres) (the North Avenue Parcel) was acquired.

For 160 parcels of land totaling 1,421 ha (3,512 acres) in the Atwell Island Water District, Phase II Environmental Site Assessments were completed. The Site Assessments directed sellers to address all recognized environmental conditions (RECs) prior to transfer of property. The LRT coordinated with appropriate regulatory agencies to confirm satisfactory mitigation of RECs prior to property transfer. The properties were thus transferred in a clean, safe, and satisfactory condition.

Research and Monitoring

Ancillary restoration studies at Tranquillity were initiated. Pitfall traps resulted in the first shrews and first herp, a western toad. The Imprinting vs. Drilling of Native Seeds trial, designed to investigate planting methods that require a minimal amount of ground preparation, had the vegetation sampled. Vegetation monitoring of the 100 “shrub islands” planted on the western and northern edges of the restoration area. Various habitat rehabilitation techniques were tested and monitored for adapting management actions on all retired lands. A reference site on vacant fields on a willing private landowner’s property was found that may provide answers to many of the management and scientific questions raised at the Demonstration Project sites. These activities are discussed in more detail in Appendix 3.

Continued monitoring occurred of groundwater levels and groundwater quality in accordance with the Quality Assurance Project Plan at the Fresno site.

Conceptual plans for monitoring groundwater and soils at the Atwell Island site were developed. Nitrate and carbonate testing were done at the Atwell Island site as had been done for the Fresno site. The irrigation system at the Atwell Island site was evaluated for its existing infrastructure; that evaluation provided a basis for future management decisions regarding supplemental irrigation applications for habitat restoration and land management activities.

Restoration and Site Management

At Atwell Island, harvesting of barley buffers was discussed and discouraged due to harvest conflicts with birds fledging. Meetings were held to discuss restoration activities, HRS plots, baseline surveys, and water purchase and delivery from Alpaugh ID. BLM planted 81 ha (200 acres) with a native mix purchased from S&S Seed. Atwell Island HRS plots initiated. Additionally, BLM planted 136 ha (335 acres) of safflower and hedgerow borders. BLM and LRT worked with the California Department of Corrections to mitigate prison fences with habitat work at Atwell Island. California Conservation Corps were contracted to set up pitfall arrays at Atwell Island in the HRS plots.

Water use from WWD and the Environmental Water Account (EWA) discussed. It is unclear what happens to water turned back that is put in the EWA.

ESRP got approval from landowners to do seed collection. Sites include railroad right-of-ways, golf course along Hwy 180 and CDFG Natural Areas at Alkali Sink and Kerman Flats Ecological Reserves. Sugar beets were hand weeded from HRS plots after the Agriculture Commissioner sent a second-year notification.

The Second Annual Report was published and sent to various divisions within the FWS per the Biological Opinion reporting requirement.

Outreach

ESRP gave a paper on the results to date of the Demonstration Project at the Western Section Conference on Restoration Ecology sponsored by the Wildlife Society in Sacramento, California. A lecture was given to biology students and faculty at California State University, Stanislaus, as part of a symposium series. Two presentations were given at the Society for Ecological Restoration, California Chapter, at a conference held in San Diego, California.

The Land Retirement Team gave an annual site tour to interested agency personnel and private parties in spring. The LRT gave a poster session on the Demonstration Project at the DOI Conference on the Environment in Albuquerque, New Mexico. The LRT spoke with the Kings County Farm Bureau and Westside Resource Conservation District Board of Directors about the program and the Demonstration Project. The LRT helped exhibit displays of SJV native plants and land retirement at the Tulare County Farm Show. The LRT gave a PowerPoint presentation of the LRDP to the Westlands Resource Conservation District. LRT attended a one-day workshop on restoration techniques sponsored by the BLM given by Craig Dremann of The Reveg Edge™ at the Kern National Wildlife Refuge. A LRT staff member attended the Central Valley Birding Symposium. A presentation was given by LRT, ESRP and BLM to The Wildlife Society Western Section Conference in Visalia, California. A LRT staff member attended the Central Valley Birding Symposium. Land Retirement Team staff attended the national conference of The Wildlife Society held in Reno, Nevada. A LRT staff member attended the Point Reyes Bird Observatory Landbird Monitoring Training Workshop.

During the summer, BLM cooperated with the California Department of Fish and Game (CDFG) and planted 24 ha (60 acres) of safflower and 4 ha (10 acres) of barley at the Atwell Island site. A lack of spring rain resulted in poor seed production such that only 13 dove were harvested by 27 hunters. At the Tranquillity site, the annual dove hunt had 35 hunters who harvested 213 mourning doves on the 24 ha (60 acres) of safflower planted by the CDFG.

Year 2002 Accomplishments

Program Administration

ESRP obtains permission from California Fish and Game to move a storage container and any other equipment or supplies to the Mendota Wildlife Area. This should help with controlling vandalism.

The third annual Land Retirement Demonstration Project Report documenting results of physical and biological monitoring programs and adaptive management of retired lands is published and posted on Reclamation's website.

Land Acquisition

At Atwell Island 559 ha (1,382.22 acres) of land and associated water from willing sellers is acquired. Late in the year 862 ha (2,130 acres) were acquired. The total acreage acquired to date in Atwell Island: 2,492 ha (6,158 acres).

In Fresno County 180 ha (444 acres) (North Avenue Parcel) was acquired.

Research and Monitoring

More ancillary trials to learn about alternate planting methods, native seed mixes, and cover crops were established. An *Atriplex spinifera* Planting Trial was installed and monitored in April, July, and December 2002, May 2003, and January 2004. A Berm and Mycorrhiza Trial was developed to investigate methods of enhancing topography and of facilitating recovery of the soil's mycorrhizal communities.

Annual monitoring activities at both sites occurred on the HRS plots and various habitat rehabilitation techniques were tested, results monitored and management actions adapted on all retired lands. All data collected for the study from 1999 to 2002 has been entered into databases, proofed and edited, and have been statistically analyzed.

As with the monitoring of physical impacts at the Tranquillity site, data were collected at the Atwell Island site to determine the potential negative effects of selenium, and other naturally occurring elements, on the site's biota. Baseline soil monitoring was initiated in 2002 at Atwell Island and comprised 432 samples. The groundwater levels and groundwater quality in Fresno continued to be

monitored in accordance with the Quality Assurance Project Plan at the Westlands Demonstration Project site. Soil monitoring included re-sampling of all deep borings and a partial sampling of shallow sites where selenium concentrations were found to be highest in 1999. Results to date indicate a declining shallow water table in response to land retirement.

An annual bird count was conducted at Atwell Island on December 16, 2002. Participants helping with this effort included personnel from BLM, ESRP, and volunteers. Data compiled during this survey was intended for the National Audubon Society Christmas Bird Count (CBC), which is an annual survey conducted simultaneously in the Western Hemisphere during December (early winter). A total of 96 species were observed and 11,381 individuals were recorded. Thirteen participants equaling 29 party hours were dedicated to this survey.

ESRP conducted a baseline survey of the "North Avenue Property" (formerly, the Bell Property), an approximately 162 ha (400 acre) parcel that was added to the LRDP property in 2001.

Restoration and Site Management

BLM planted 136 (335 acres) safflower and hedgerow borders.

A fire occurred at Tranquillity site. Seed collecting was amplified in 2002-2003 Growing Season (See Appendix 3).

Outreach

The annual dove hunt, in which 43 hunters harvested 128 mourning doves, was held on the 24 ha (60 acres) of the Tranquillity site planted in safflower by the California Department of Fish and Game.

ESRP staff member attended the Partners in Flight Conference in March 2002 and presented information on avian responses to restoration in a poster. ESRP personnel and senior staff attended The Wildlife Society's Western Sections annual conference held in Visalia, California. Senior staff presented information and progress regarding the LRDP project. Another report also was presented at this conference on ornate shrews that included information derived from the LRDP project. Two articles were featured in the Central Valley Bird Club Bulletin submitted by an ESRP staff member. Two ESRP senior staff members presented papers on restoration of retired farmlands at a joint Ecological Society of America and Society for Ecological Restoration conference held in Tucson, Arizona.

The LRT and BLM gave a presentation on Atwell Island project accomplishments for BLM State Office Staff. BLM gave a talk on Atwell Island project for the

Tulare County Audubon Society. A tour of the Atwell Island project was given to a group from The Wildlife Society Western Section.

Year 2003 Accomplishments

Program Administration

Requests for restoration costs from San Luis Drainage Feature Re-evaluation coordinator Mike Delamore were developed.

Sign design for Research Site Land Retirement Demonstration Project was suggested. A Fire Plan for Tranquillity site was submitted to California Department of Forestry. Due to increased costs and logistical complications, BLM took over from ESRP all monitoring and management at Atwell Island site.

Harry McQuillen from FWS meets with WWD, BLM, Reclamation, and the I-5 Corridor Committee.

The third Land Retirement Demonstration Project Report was published documenting results of physical and biological monitoring programs, and adaptive management of retired lands. An electronic copy of this report was posted to Reclamation's website.

Land Acquisition

In Atwell Island, 862 ha (2,130 acres) of land and associated water were acquired. Total BLM acres acquired now totals 2,492 ha (6,158 acres).

Research and Monitoring

LRT and ESRP gave a presentation to the FWS Environmental Contaminants Division regarding the potential biological effects of land retirement and selenium. The reaction from Dr. Joe Skorupa was that land retirement "is not the loaded gun" FWS envisioned, but that the high concentrations in the groundwater warranted further monitoring (Joe Skorupa).

At Tranquillity site, the Pre-irrigation Trial was imprinted, as were the Herbicide and Growth Form Trials, and Burn Plots to examine the effectiveness of mowing as a pre-treatment and of imprinting induced disturbance following burning for restoration in *Bromus madritensis* dominated habitats (See Appendix 3).

Three soil samples were taken from near the center of each of the 48 0.8 ha (2 acre) research plots and groundwater monitored at Atwell Island. The Christmas count at Atwell Island had 79 censured bird species. Hedgerows were responsible for increases in species (20 to 27) and from 956 to 1,709 individuals from previous year. A major population of Horned Lizards and San Joaquin Valley Coachwip was discovered at Atwell Island.

Restoration and Site Management

Improvements were finalized by ESRP to the imprinter so that smaller amounts of seed could be run in the hopper. Study plots for burn, mowing, and herbicide/growth form trials (16 0.2 ha [$\frac{1}{2}$ acre] plots) were installed (See Appendix 3).

Quail Unlimited installed a guzzler at Tranquillity in area used for dove hunt. A trespass in the North Avenue Parcel occurred due to mismanagement of neighbor's irrigation pond that overflowed and wetted about 0.49 ha (1.2 acres) of LRT land. They also rutted up the road with heavy equipment. Hedgerows were hand-seeded. Fencing was installed at the nursery to prevent annual Atriplex from blowing in and to discourage trespass sheep. On the south side of the nursery, donated 3.8 liter (1 gallon) pots of alkali sacaton grass were planted. Barley had to be re-bagged at Mendota to be put in mouse-proof container. Large-scale restoration of 32 ha (80 acres) Manning Avenue Restoration was attempted.

The Tranquillity Native Seed Nursery (1.6 ha [4 acres], with an additional 0.8 ha [2 acres] being managed for future planting) was moved to a site on better soil and nearer a more convenient water supply. Research on seed delivery, plant propagation, and seed production methods was conducted on 34 different San Joaquin Valley locally collected native plant species. Five species show a high potential for mechanized production and harvest. Historical records for particular species were investigated from primarily herbarium specimens and site-searches initiated. Historical records for particular species were investigated from primarily herbarium specimens and site-searches initiated (See Appendix 3).

BLM established 48 km (30 miles) of hedgerows (about 20 ha [50 acres]), seeded 32 ha (80 acres) of range land after treatment with propane flamer, planted 150 trees in riparian-canal areas using hydro-planter, planted 50 potted trees and shrub in riparian-canal areas and developed a native seed source by increasing seed collection activities through seed collecting contracts and a seed grow-out contract. Restoration activities were coordinated with cooperating farmers who performed the work. Additionally, BLM developed 4 ha (10 acre) wetland for breeding season.

Outreach

BLM and LRT helped to establish and work with the newly established Tulare Lake Basin Working Group. They worked on developing partnerships with Sequoia Riverlands Trust; USDA NRCS; and USDI Fish and Wildlife Service. Tours given by BLM of Atwell Island project included The Wildlife Society Western Section, representatives of the California Department of Corrections and EDAW, the CVPIA Restoration Group from FWS, Patagonia's Sustainable Cotton Tour and to the BLM Bakersfield Field Office management team and interagency LRT. Workshops and conferences attended by BLM staff include: Seed for Success workshop in Sacramento (Instruction workshop on seed collecting), daylong workshop and open house at ConservaSeed in Courtland, tour

of Union Slough restoration project in Yolo Co., and the Ecological Farming conference and Wildfarm Alliance Workshop at Asilomar.

BLM provided a day in the field for 25 school kids from Sierra Elementary Schools to tour Atwell Island and trap k-rats and horny toad lizards with BLM biologists. ESRP gave a presentation on the LRDP and SJV plant communities to the advanced science classes at Kerman High School in Kerman, California. A presentation on wildlife population monitoring in the Central Valley was given to biology classes at Kerman High School. Interested, biology career-driven students were offered the opportunity to accompany ESRP staff biologists on the spring blunt-nosed leopard lizard (*Gambelia sila*) survey at Pixley National Wildlife Refuge. ESRP staff members hosted an educational volunteer day for Kerman High School advanced placement biology students at the Tranquillity Native Plant Nursery. Students worked to remove weeds and transplant native species, do birding, and have lessons on local plant communities and habitat restoration. ESRP sponsors a student from the Center for Advanced Research and Technology who analyzed some of the small mammal data for her class project.

The LRT provided a Field Tour for the Sacramento Fish and Wildlife Restoration Program Implementation Division of CVPIA Land Retirement Demonstration Project and SJR Riparian Habitat. LRT member attended the Lemoore NAS Revegetation Workshop by John Crane and Craig Dremman and the UC Extension Conservation Tillage Workshop at Five Points. The LRT gave a second presentation to the Kings County Board of Supervisors. LRT gave a special Land Retirement Presentation to Wayne White, FWS.

LRT site tours were given to 50 members of the Fresno County Economic Opportunity Council and I-5 Business Corridor and to Dr. Ken Lair, Research Ecologist and Botanist from Reclamation's Denver Technical Services Center. The latter contact resulted in a cooperative effort being established for 2004 with the USDA-NRCS Plant Materials Center in Lockeford, California to augment seed supply.

The 2003 an annual dove hunt had 42 hunters who harvested 255 mourning doves at the Tranquillity site planted in safflower by the California Department of Fish and Game.

A science education program at Alpaugh School was initiated, with possible coordination with the California Institute of Biodiversity using CAL-Alive CD-ROM, their educators, and the Atwell Island Land Retirement Restoration Project.

Year 2004 Accomplishments

Program Administration

At Tranquillity, work was accomplished with a revised contract with ESRP.

Research, restoration, and continued acquisition at and Atwell Island continued with the Interagency Agreement with the Bureau of Land Management.

The Land Retirement Demonstration Project Fourth Annual Report was published in January 2004. An electronic copy of this report was posted to Endangered Species Recovery Program's website at <http://esrpweb.csustan.edu/publications/pdf/lrdp/2002ar>

A draft of the 5-year analysis and report was started in October 2004.

Development of an Implementation Plan for recovery of upland species on restored retired agricultural lands began. Discussions with listed species experts were held. Discussions of how to best utilize the techniques and native plant species of the CVPIA Land Retirement Program for upland habitat restoration on retired agricultural lands used this information.

Land Acquisition

Acquisitions for the Land Retirement Demonstration Site at Atwell Island continue to target completing transactions to reach the goal of 3,238 ha (8,000 acres). During FY 2004, 12 ha (30 acres) were purchased and an additional 62 ha (154 acres) closed by the end of FY 2004 (total 74 ha [184 acres]). Other acquisition actions began with the acceptance of a DOI offer for a 253 ha (625 acre) parcel and for an appraisal currently underway on a 65 ha (160 acre) parcel.

Research and Monitoring

ESRP met with Dr. Hurlbert about statistical questions and procedures, transformations of the data, and how to implement that.

Potential trials and restoration activities at Tranquillity: showplace, nursery, hedgerows, large scale restoration, herbicides vs. growth-forms, pre-irrigation trial, imprinting vs. broadcasting trial, seed augmentation, planting method trial and water use trial (See Appendix 3). Research for the program continued in field trials focused on determining ways to reduce competition between native plants and weedy species. Management activities continued in addition to monitoring, data gathering and analysis for the habitat Restoration Study at both the Tranquillity (ESRP) and Atwell Island (BLM) study sites.

Data gathering for the 5-year Habitat Restoration Study, designed to determine the effects of habitat restoration on wildlife on 20, 4 ha (10 acre) plots at the Tranquillity site, was completed. 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).

The Land Retirement Team, ESRP, and BLM staff assisted Dr. Ken Lair, Reclamation Restoration Botanist, to design, establish, and sample plots containing 8 native plant species planted with a variety of techniques. Habitat rehabilitation techniques in replicated trials were conducted on 64 plots on 6 ha

(15 acres) at the Tranquillity site and inter-planted on 8 ha (20 acres) of alfalfa at Atwell Island.

Awarded grant from Reclamation's Science and Technology Program enabled research to be conducted on the effects of land retirement on project groundwater and soil. Continued monitoring of soil and groundwater conditions at both sites. Monitoring equipment to gather weather data at Atwell Island site to be integrated into California Irrigation Management Information System (CIMIS) was purchased.

The conceptual model of groundwater flow at Tranquillity site was developed in preparation for numerical model simulating groundwater response to land retirement.

Restoration and Site Management

ESRP and BLM noticed *Atriplex lentiformes* die-off in Mendota area and throughout the SJV.

At the Atwell Island site, hedgerows with native plant species have been established. A San Joaquin kit fox was observed using the hedgerows established in January 2003. 80 km (50 miles) of hedgerows were established on the Atwell Island project site and restoration work initiated on more than 40 ha (100 acres), including planting out flamed grasslands, canal banks, tree poles and upland shrub planting in formerly alfalfa fields (approximately 8 ha [20 acres]), and 4 ha (10 acres) of shorebird habitat and planting. Cooperation with an organic farmer to grow-out Alkali Sacaton and Indian Rice grass was initiated.

The SJV native plant nursery at Tranquillity expanded to 2 ha (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 0.2 ha (0.5 acre) plots using mechanized production and harvesting methods. Mechanized seed cleaning equipment was purchased and operations established. Large quantities of seed were collected under contracts.

Research on seed delivery, plant propagation, and seed production methods continued with the USDA Plant Material Center in Lockeford, California. Seed augmentation of three targeted species will be done in FY 2005.

Restoration and site management activities at both sites were accomplished with cooperating farmers. Barley was planted at Tranquillity on 243 ha (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 49 ha (120 acres) that was previously used as research trials so that new trials can be installed in FY 2005. On 32 ha (80 acres), a new cultivar of barley (UC937) was planted that UC Davis developed for use on high saline soils.

At Atwell Island, a wildlife farming demonstration area was established with 6 ha (15 acres) of native shrub plantings interspersed with 8 ha (20 acres) of crops, 2 ha (5 acres) each of vetch, milo maize, 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 FY 2005.

The existing 8 ha (20 acres) wetland at Atwell Island was managed for wintering waterfowl.

Outreach

Presentations and posters were given at a number of forums in FY2004. These included the 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 seven 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 FWS 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 studied and traveled the California water and agricultural regions for the past 15 years. Their work is sponsored by the Institute of Spatial Analysis and Planning (ISPA) in areas of intensive agriculture at the University of Vechta.

ESRP gave a presentation to two environmental science classes at the Center for Advanced Research and Technology (CART) in Clovis, California. ESRP biologists, CART students and teachers, and Clovis Botanical Garden personnel transplanted more than 150 native plants and installed a drip irrigation system along the Clovis Community Trail. Plants were donated from the LRDP nursery. ESRP biologists held an interview and volunteer day at the ERSP warehouse. The event was open to CART students interested in a part-time seeding experiment position with ERSP. The position was offered to and accepted by an environmental science student in his junior year of studies at CART.

Various LRT members and ESRP biologists attended the Hedgerows in Agriculture workshop sponsored by the Community Alliance with Family Farmers at the UC Center in Fresno, California.

Two presentations were given at the American Society of Mammalogists meeting at Humboldt State University, Arcata, California. A presentation was given at the Raptor Research Foundation conference in Bakersfield, California.

The California Department of Fish and Game annual dove hunt at the Tranquillity site had 38 hunters who harvested 183 mourning doves.

Year 2005 Accomplishments

Program Administration

The LRT received Reclamation's Science and Technology Program was awarded funds to conduct research on the effects of Land Retirement on project groundwater and soil.

A Cooperative Agreement with the Westside Resource Conservation District in Tranquillity, California was developed to establish upland habitat restoration units on retired lands in the SJV.

Participation in the Tulare Lake Basin Working Group fostered further working partnerships with Sequoia Riverlands Trust; Tulare County Audubon Society; USDA-NRCS; and FWS Refuges and Joint Venture Program for the Atwell Island site.

A California State University Fresno-Agriculture Research Initiative grant proposal was submitted with Dr. John Constable of CSUF by Dr. Nur Ritter of ESRP.

The Five-Year Land Retirement Demonstration Project Report (1999-2004) will be produced, pursuant to the FWS BO September 1999 for the CVPIA Land Retirement Program Demonstration and put on the Reclamation website.

Land Acquisition

The acquisition process for two parcels totaling 318 ha (785 acres) of land and associated water within the Atwell Island Water District was completed.

Research and Monitoring

The fourth year of the 5-year study at the Atwell Island Project Site continued. Monitoring soil and groundwater conditions at both sites continued. Numerical simulation of groundwater flow and salt transport in the shallow groundwater at the Tranquillity Site will be performed. The Hydrosphere groundwater model will be utilized to simulate groundwater flow and advective transport of solutes at the demonstration project site.

Land Retirement Demonstration Project
Five Year Report

Research on seed delivery, plant propagation, and seed production methods continued with the USDA Plant Material Center in Lockeford, California. Seed augmentation of three targeted species will be done in FY 2005.

Data gathering for the 5-year Habitat Restoration Study, designed to determine the effects of habitat restoration on wildlife on 20, 4 ha (10-acre) plots at the Tranquillity site, was completed. The fourth year of the 5-year study at the Atwell Island Project Site will be done and the restoration activities continue, emphasizing previously successful techniques, while developing and testing new methods.

The Reclamation Denver Technical Services Center Restoration Ecologist Dr. Ken Lair will help with trials 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

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 and findings will be reported in the FY2005 report. 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.

Restoration and Site Management

Restoration and site management activities at both sites were accomplished with cooperating farmers. Barley was planted at Tranquillity on 243 ha (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 49 ha (120 acres) that was previously used as research trials, so that new trials can be installed in FY 2005. On 32 ha (80 acres), a new cultivar of barley (UC937) was planted that UC Davis developed for use on high saline soils.

Restoration activities at the Atwell Island Project Site will continue, emphasizing previously successful techniques, while developing and testing new methods. Restoration acreage will expand from the current 61 ha (150 acres) per year to more than 101 ha (250 acres). The existing 8 ha (20 acres) wetland at Atwell Island, established with the cooperation of the USDA-NRCS, was managed for wintering waterfowl. 51 km (32 miles) (32 ha [80 acres]) of hedgerows were established with native shrubs. On 8 ha (20 acres) of range land, seeding occurred after treatment with propane flamer. Iodine bush was seeded on 2.8 ha (7 acres) of a sump (former evaporation pond). A mix of native annuals and perennials was planted on 160 acres. A hydro-planter installed 200 tree cuttings in riparian-canal areas along with 150 potted trees and shrubs. BLM developed a native seed source by increasing seed collection activities (approx. 8000 pounds) utilizing seed collecting contracts and established a 1.5 acre grow-out area for native grass

seed under contract Two acres of perennial grass seed were planted along ditch banks. Two more diversified upland habitat units were established on 80 acres. BLM coordinated with cooperating farmers to carry out restoration activities.

Outreach

Presentations given this year included one by a Reclamation hydrologist and soil scientist on research findings regarding soil and groundwater response to land retirement in the Western San Joaquin Valley at the International Salinity Conference held at Riverside, Ca in April, 2005. At the Society for Ecological Restoration, California Chapter annual meeting at Bass Lake, California, ESRP had one poster abstract and three oral presentations accepted and BLM and FWS another one.

BLM held a workshop on recreation and tourism potential for Atwell Island and the Tulare Basin. BLM established a partnership with AmeriCorp NCCC which provided a crew of 10 to work on numerous projects including construction of 0.5 miles of nature trail, reforestation of 3 miles of ditch and pond banks, and general cleanup and maintenance of the administrative site. The crew also worked on a greenhouse at the Alpaugh School as a first step to get students involved in the restoration project. The crew also conducted a major cleanup event and removed over 45 tons of garbage from the community, much of which might otherwise have been dumped on the project area. BLM continued to work with the Tulare Lake Basin Working Group and to help establish Tulare Basin Wildlife Partners, an NGO which will be a cooperator on the project. BLM expanded its work via partnerships developed with Tulare County Audubon Society; Alpaugh School District; Citizens for a Better Alpaugh; State Park Service – Allensworth SHM; USDA NRCS; USDA Forest Service (Trails Unlimited); and USDI Fish and Wildlife Service (FWS).

ESRP gave a day-long tour to the coordinators and nursery staff from the five native plant nurseries of the Golden Gate National Recreation Area. ESRP sponsored a booth and gave presentations to 100 underprivileged school children at the USDA Forest Service Central California Consortium event held at Grizzlies Stadium, Fresno, California.

ESRP developed a web-site that makes information on the Land Retirement Demonstration Project and research results available to the public and to cooperating agencies. Links are provided to the various annual reports and the 5-year report. The ESRP web site can be accessed at:
<http://esrp.csustan.edu/projects/lrdp/>.