

FY 2011 Annual Manager's Report



Figure 1 Sacaton grass dominate the view of Mt. Bruce, photo taken at the Audubon Research Ranch, Las Cienegas NCA

Las Cienegas National Conservation Area



I. Introduction

Period of Report: October 1, 2010 through September 30, 2011.

Unit Name and Contact Information:

Las Cienegas National Conservation Area (LCNCA)
Tucson Field Office
3201 E. Universal Way
Tucson, AZ 85756
(520) 258-7200
Las Cienegas National Conservation Area website

Manager's name: Markian Rekshynskyj

Associated Field, District, and/or State Offices:

Field Office: Tucson Field Office
District: Gila District
State: Arizona State Office

Establishing authority: Public Law 106-538, Dec. 6, 2000

Acreage of public land: 41,972 acres of Public Land in Las Cienegas NCA

Estimated annual visitation: FY 2011: **26,000 visits**

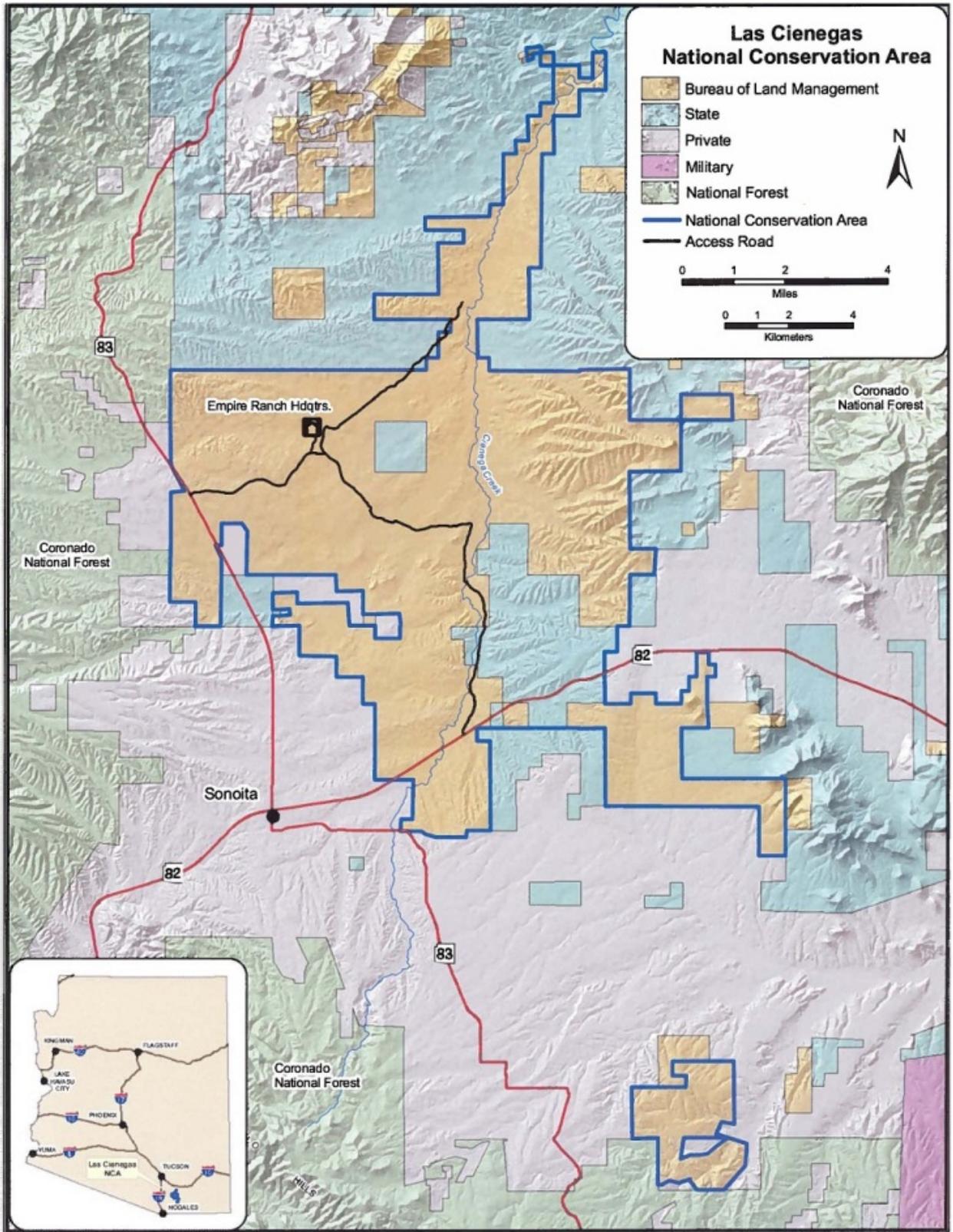


Figure 2 Las Cienegas National Conservation Area general map showing only the main roads.

1. Natural and Heritage Resources Conditions

a. Natural resources trends

LCNCA contains 5 major Natural Resources:

- Native Grasslands
- Cienega Creek Riparian Area
- Outstanding Biological, Ecological, Cultural, and Paleontological Resources
- Historic Empire Ranch Headquarters
- Appleton-Whittell Research ACEC

Upland Habitats



Figure 3 The Uplands of LCNCA after the Cinco Fire (Photo by H. Swanson)

Of the five rare vegetation community types found at Las Cienegas NCA, semi desert grassland is the most abundant and covers about 94% of the total area. This grassland is part of a larger complex of semi desert grasslands within the Apache Highlands Ecoregion which includes central and southern Arizona, southern New Mexico and northern Mexico. Over the past 130 years grasslands in this borderland region have experienced dramatic changes including a reduction in perennial grass cover, shrub and tree encroachment, soil erosion, and fragmentation. The causes for these changes are debated, but experts have

implicated regional climate change, suppression of wildfire, poorly-managed livestock grazing, and land cover conversion for agriculture and exurban development. More than 36% of the historic grasslands in the region have been lost due to shrub encroachment. Of the remaining extant grasslands, 50% are shrub-encroached but restorable with fire while only 26% are open native grasslands. The grassland at LCNCA makes up a total of 4% of these open native grasslands.

Riparian Habitats

Riparian habitats in Las Cienegas NCA include cottonwood-willow riparian forests, cienegas (marshes), sacaton (relatively tall grass) grasslands, and mesquite woodlands or bosques. Las Cienegas NCA's riparian habitats support six of the federally listed species and many other BLM sensitive species (for example, Arizona giant sedge, Sprague's pipit, yellow-billed cuckoo, and gray hawk).

Special Status Species



Figure 4 Setting up mist nets to study Grasshopper sparrows, a sensitive species in LCNCA



The LCNCA supports six federally listed threatened and endangered species including the endangered lesser long-nosed bat, Huachuca water umbel, Gila topminnow, Gila chub, and southwestern willow flycatcher, and the threatened Chiricahua leopard frog. Overall the NCA supports over 230 birds, 60 mammals, 43 reptiles and amphibians, and three fish.

Las Cienegas NCA supports some of the largest and most significant natural populations of Chiricahua leopard frog, Gila topminnow and Gila chub. Higher elevation grasslands contain a high density of agave, a food source for the endangered nectivorous lesser long-nosed bat.

Air and water

Cienega Creek watershed is estimated to supply approximately 25% of Tucson Arizona ground water. Cienega Creek is a very important water resource in this transitional region of the Chihuahuan and Sonoran deserts.

Ground Water and Surface Water: BLM continues to support USGS maintenance of a stream gauge on Cienega Creek. Instantaneous flows are also collected at one location on upper Cienega Creek and one location on upper Empire Gulch. BLM is in the initial phase of designing a ground-water monitoring program for the NCA. The Nature Conservancy through an Assistance Agreement with BLM has developed a detailed database of wells and associated attributes, and we are working together to collect baseline information including water depths from a subset of these wells.

Other natural resource trends

- One of the major non-native grasses, Lehmann lovegrass, grows within many locations in LCNCA and the prospect of removal is currently not feasible. Discussions about treatments concluded that trying to remove all Lehmann lovegrass would be unsuccessful.

b. Heritage resources trends

LCNCA contains numerous cultural and paleontological sites.

Historic Sites

The main historic cultural resource is the historic Empire Ranch Headquarters, once one of the largest ranches in southern Arizona. The Empire Ranch headquarters contains a 22 room adobe ranch house and many other smaller historic buildings.

The structures are standing and in fair shape and have received a significant amount of preservation work mostly in the building's adobe foundations and other major components of building stability. BLM and the Empire Ranch Foundation accomplished many preservation projects following the Empire Ranch Adaptive Reuse Plan and continue to achieve preservation projects.

One of the historic houses at Empire Ranch Headquarters known as the "Huachuca House" was remodeled in 2011 as the new Visitor Contact Station, and will be managed by the

Empire Ranch Foundation. The facility should be ready for use in 2012.

<http://www.empireranchfoundation.org/PDFdocs/May2012.pdf>

<http://www.empireranchfoundation.org/>

The historic ranch buildings (Vail house, Huachuca house, New Ranch House, Hired Mans



House, and miscellaneous support structures (corrals, windmill, hay barn) at the ranch headquarters area were structurally stabilized prior to FY 2011. These structures remain stable, but are assessed and maintained periodically to ensure that condition does not deteriorate. BLM and the Empire Ranch Foundation continue to work closely to ensure continued stabilization and preservation of the historic ranch headquarters site.

Figure 5 Empire Ranch Headquarters' Historic Windmill (Photo by K. Hughes)

Restoration efforts were undertaken through a multiple partners: the Empire Ranch Foundation and volunteer efforts by individuals and work-day groups sponsored by ERF.

During FY2011, planning was initiated for two large-scale rehabilitation projects at the Empire Ranch: final stabilization and repairs to the historic Adobe Hay Barn, and structural and safety rehabilitation to the Ranch House. Working in collaboration with the Arizona State Office, National Operations Center in Denver, and contract specialists, TFO staff expects to have the Hay Barn contract completed during FY2013. The contract specs for work on the Ranch House have been developed and the contract was awarded in FY2011 with work to be completed in FY2013. Both projects are being implemented with Deferred Maintenance funding.

Ongoing efforts to preserve, protect, stabilize, and interpret historic buildings and structures at the Empire Ranch Headquarters continued in FY 2011 including:

- Continuation of repairs to the post-and-rail corral fences
- Repair of the wood-and-glass partition entry to the Stone Corral
- Restoration of walls and plasters in the historic Ranch House
- Completed rehabilitation of the Master Bedroom, including finish trim and paint
- Continued restoration of all historic doors on the Ranch House
- Successful implementation of contract for repair of the South Lintel on the Zaguan
- Removal of hazard branches/limbs around structures and public areas
- Implementation of mitigation measures for all safety hazards noted in 2011 Gila District Health & Safety report
- Landscape planning

Most of the historic site's buildings and structures such as corrals and tack sheds were part of the grazing program until a few ago. The use of the historic ranch buildings by the grazing operator existed before BLM acquired the LCNCA property in 1988, and many of the uses were grandfathered into the BLM grazing permits until BLM could complete the required RMP and reallocate or continue some of the grazing program uses at the various historic ranch sites.



Figure 6 Empire Ranch Foundation volunteers conduct historic preservation work.

Other Historic Ranch Sites

There are several lesser known historic ranch sites located in LCNCA including the Cienega Ranch House, Rose Tree Ranch (The High Lonesome) the Heart S and the historic Hummel House. Occupancy and uses by the grazing permittees in the buildings and barns were phased out in recent years. Plans are underway to determine more suitable uses for these BLM administrative sites for preservation, interpretation, environmental education or to have the sites rehabilitated to a natural condition.

Some of the facilities at these sites will continue to be used by the Grazing Program for livestock watering sources, corrals, pens, and storing grazing program equipment.



Figure 7 A mesquite “retaque” fence surrounds The Hummel House, a lesser known adobe historic ranch site in LCNCA

The Hummel House located within LCNCA, is connected to the nearby historic Kentucky Camp, an intact ghost town located about 20 miles to the east in the Santa Rita Mountains and one of the USFS Coronado National Forest’s most significant historic sites with a “room with a view” rental. There are opportunities to connect the two sites with interpretation or a friend’s group outreach efforts. There is interest in using the old adobe Hummel House for workshops, guided hikes, horseback or wagon rides. BLM began talks to recruit partners, volunteers or lessee to help keep the building in use and maintain to avoid further deterioration and work toward restoration to near its original historic condition.

BLM determined through the NEPA process to remove the remaining buildings and structures not needed for BLM administrative use or for the grazing program. Several of the buildings are in advanced disrepair due to natural deterioration, vandalism from visitors including border smuggling activities, biological hazards from rodents and insects and are unsafe for public visitation.

Cultural Sites

There are numerous cultural sites within LCNCA. Many of the most notable sensitive cultural and prehistoric sites are kept confidential.

The TFO Field Manager and Archaeologist maintain a good rapport with cultural resources staff and council members of the various American Indian Nations and tribes that have concerns in LCNCA.

Wild and Scenic Rivers

LCNCA contains one of the 13 rivers in Arizona recommended for Wild and Scenic River status in 1997. Two segments of Cienega Creek were found “suitable” to be designated by Congress as **scenic** components of the National Wild and Scenic River System.

Cienega Creek's two separate segments and two tributaries, Empire Gulch and Mattie Canyon totaling 10.5 miles contain outstanding habitat for the Gila top minnow, federally listed as endangered. Wild and Scenic River designation awaits Congressional action.



Figure 8 Cienega Creek in Las Cienegas NCA

National Trails

The LCNCA Resource Management Plan (RMP) includes plans to build a segment of the Arizona Trail, now a National Trail managed by U.S. Forest Service. Several years ago the AZ trail planners opted to not build a segment in LCNCA due to constraints found in the LCNCA RMP. As of 2011 the AZ trail planners expressed an interest to take BLM up on the plan to build a portion of a link trail between a BLM trailhead and the AZ trail (about 2miles long) due to an open pit mine proposal in the adjacent Santa Rita Mountains. BLM prepared a plan to provide AZ Trail users with parking and potable water for horseback riders, bicyclists and hikers a trail link to the main portion of the AZ Trail.

Paleontology

Plans are underway for conducting a paleontological survey in LCNCA, enabling BLM to monitor more precisely areas containing dinosaur fossils dating from the Cretaceous period. Several notable fossils were found over the years and one reproduction of a newly discovered dinosaur named "Sonorasaurus" is on display at the Arizona Sonora Desert Museum.

Other Heritage Resources

Many cultural features within LCNCA are included in the proposed Santa Cruz Valley National Heritage Area, and if selected, would provide a framework for heritage-based economic development, including tourism-related increases in local jobs, business incomes, and tax revenues. There is a growing interest in the National Heritage Areas because of its proven success as a regional economic development strategy.

<http://www.santacruzheritage.org/home>

c. Land Health Assessments

84% of the total acreage of LCNCA was assessed and found to be meeting standards in 2011 By BLM rangeland staff , NRCS (Natural Resources Conservation Service) and the University of Arizona Extension Service.

There are six grazing allotments in LCNCA: 1. Empire-Cienega, Rose tree, Vera Earl, Clyne Ranch, Empirita and Mt. Bruce.

Three evaluations were completed in 2011 on Clyne Ranch, Empire-Cienega and Mt. Bruce and all six allotments are meeting the Land Health Standards.

d. Inventory

The BLM Tucson Field Office resource staff in conjunction with the Sky Island Alliance and the Nature Conservancy (TNC) is currently involved in a ranch-wide inventory of erosion control needs and will formulate an erosion control/watershed improvement plan which will require obtaining a Clean Water Act Section 404 Nation Wide permit from the United States Army Corps of Engineers (USACE). Additionally, the USACE provided Section 404 compliance training sessions for Gila District and Tucson Field Office staff.

e. Grassland Restoration

Ongoing efforts continued to restore Mesquite invaded grasslands and BLM hosted arroyo restoration techniques.

Over the past 4 years, approximately 12 contracts for mechanical removal of invasive mesquite trees took place over a thousand acre of mesquite invaded grasslands, however in 2011, all the contracts removing mesquite ended and a project evaluation took place resulting in a revision of the Invasive Mesquite Tree Removal Program. The revision included more attention to the Migratory Bird Treaty Act, continued rehabilitation to the areas that received off-road impacts, minimized administrative or permitted uses to drive off-road to the treat and remove the mesquite, and to discontinue removing mesquite trees stands (bosques) within drainages and riparian areas.



Figure 9 Zeedyk workshop teaches hands-on techniques in erosion control in LCNCA

2. Recreation Facilities, Roads and Trail Conditions

a. Overview

The recreation program continues to be in the implementation stage. Several recreation sites planned in the 2003 RMP are yet to be completed. Plans to construct site delineations, signage and fencing were put on hold until the Mesquite removal program is completed in those general areas. Even though all recreation facilities are not in place visitors continue to use the areas.

This Airstrip Recreation Group Site is nearly complete, with about half the infrastructure needed in the form of parking areas. This site receives the majority of use in LCNCA and site contains a restroom, potable water, all in very good condition.

Empire Ranch Headquarters contains a restroom, ADA compliant Interpretive Trail.



The Heritage Discovery trail is an interpretive loop surrounding Empire Ranch Headquarters. The trail is nearly complete. New additions include a unique adobe brick hand wash station, benches and interpretive panels. The entrance gate serves as a use filter, to allow for pedestrians but not allow for incompatible uses such as equestrian or motorized vehicles that would impact the ADA (American with Disabilities Act) compliant trail tread. The entire remaining areas of LCNCA contain outstanding opportunities for horseback riding and scenic back country roads for motorized uses.

b. Construction

The construction of the Heritage Discovery Trail continued with the addition of ADA (American with Disabilities Act) compliant tread and developing, fabricating and installing interpretive features including waysides and benches completed in 2011 by the BLM workforce.

c. Maintenance.

The contract specifications for work on the Empire Ranch House were developed and the contract was awarded in FY2011 with work to be completed in FY2013. Both projects are being implemented with Deferred Maintenance funding.

d. Signage



Figure 10 Although this photo depicts a good quality “portal sign” installed in 2007, by 2011 all the graphics faded and peeled and will be replaced in 2013.

LCNCA prepared a sign plan in 2005. The sign plan is being updated, due to new 2011 State Office Policies. LCNCA converted from a three to a four digit system road numbering system (as required by the AZ state Office). Recreation staff began planning to request for funding to change every sign related to road numbers, including waysides, maps, road markers and all other publications and signs.

A comprehensive travel and transportation management plan was completed in the 2003 LCNCA RMP. Approximately 91.9 miles of roads and trails are open for motorized use. Nearly 6.6 miles are to be converted to non-motorized trail for hiking, horseback or bicycle.

3. Outreach, Environmental Education, Interpretation and Volunteers

a. Outreach.

Both BLM and their partners provided personal and non-personal contact including web sites, interpretive panels and other publications.

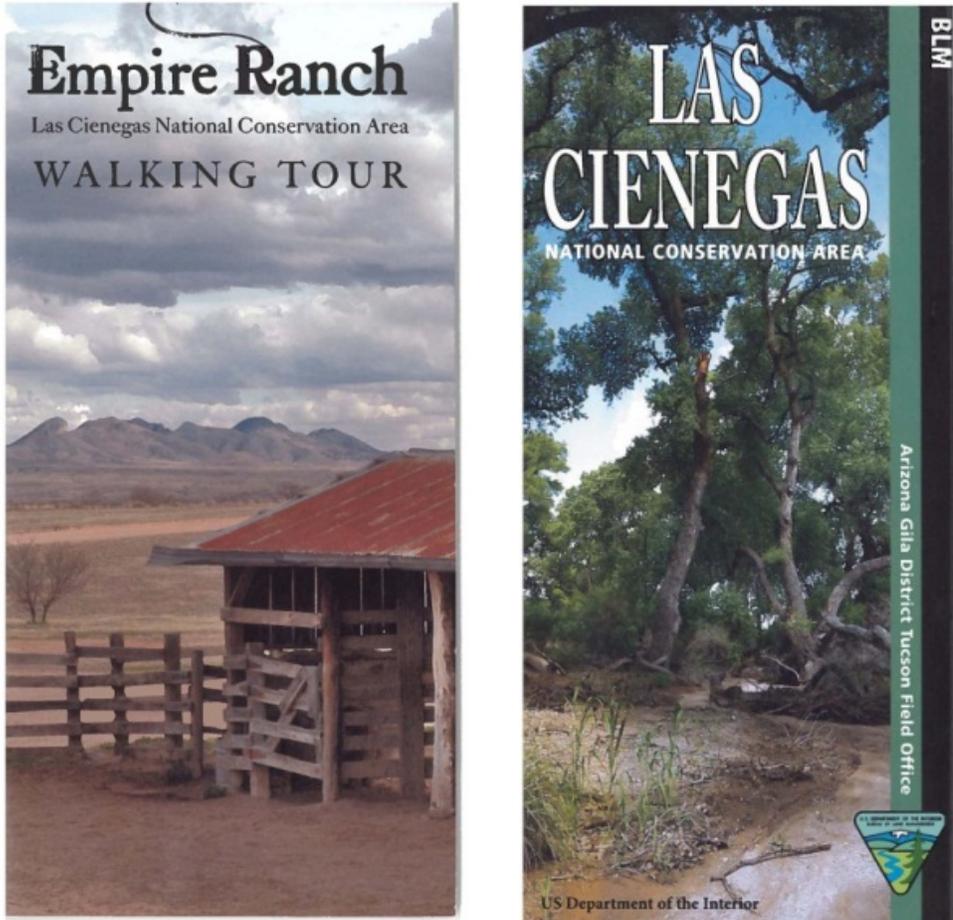


Figure 11 Front Panel of the New Walking Tour Guide and Official BLM map and Guide publication up for reprint in 2011

- BLM-TFO staff authored four articles for publication in the ERF quarterly newsletter. The foundation prints and distributes 1,000 copies of the newsletter; it is also posted on their website, which receives several thousand hits monthly.
<http://www.empireranchfoundation.org/>
- ERF and BLM developed a new Walking Tour Guide in 2011, ready for print in 2012. ERF provided over 100 hours of personal tours of the Empire Ranch Headquarters ERF worked with BLM to provide input in printed materials. BLM provided information through public phone and web inquiries A full color guide, with narrative of LCNCA features and LCNCA map, was available in 2011. A revision and reprint of the guide and map is being managed by the Arizona State Office in 2011, may be available for public release in 2012.

b. Visitor Centers

One of the historic houses at Empire Ranch Headquarters known as the “Huachuca House” was remodeled in 2011 to be used as the new Visitor Contact Station, and will be managed by the Empire Ranch Foundation. ERF prepared their Visitor Contact Station Plans to be approved by the Tucson field office and LCNCA managers.

Empire Ranch Headquarters served as an informal visitor center for many years.

c. Environmental Education



Figure 12 BLM intern teaching riparian monitoring techniques to Cienega High School students

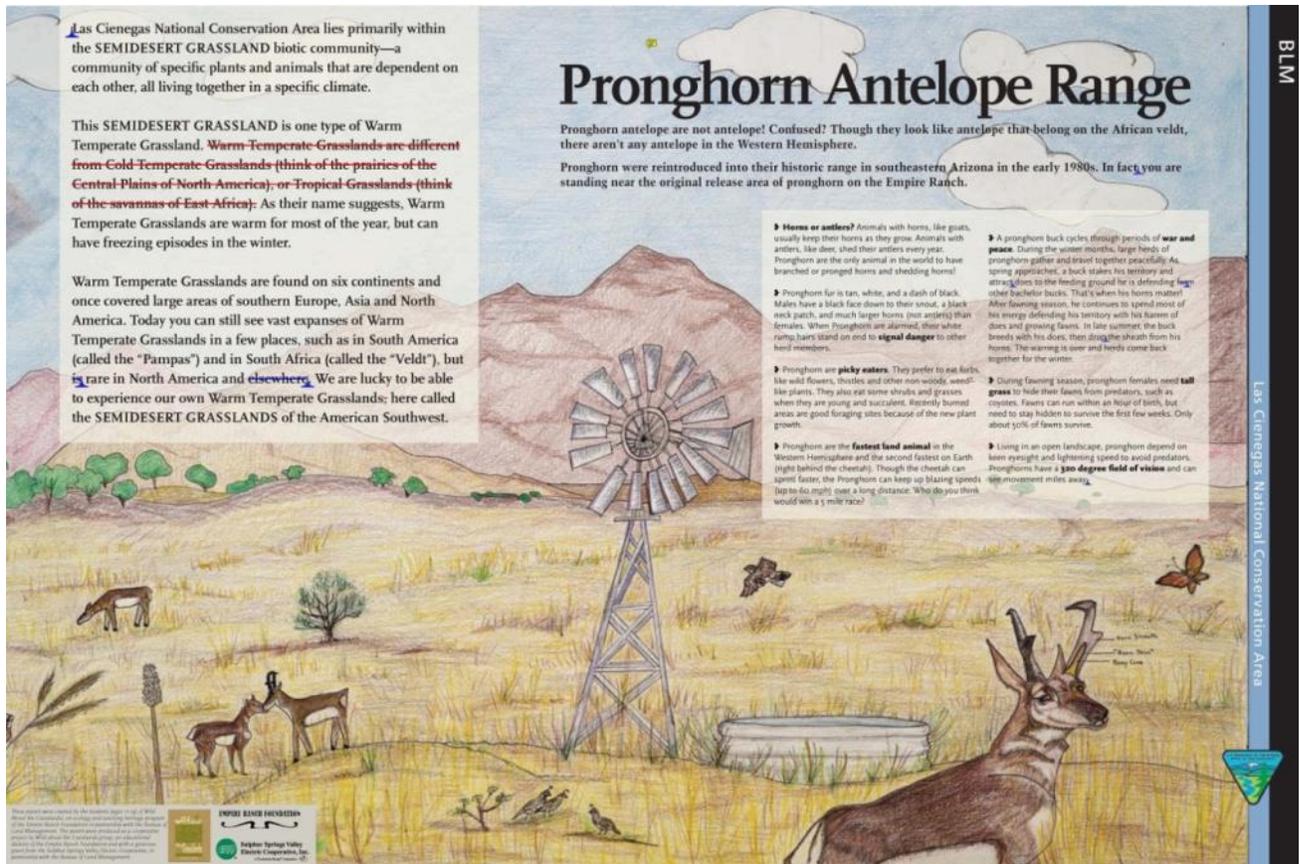


Figure 13 Draft Partnership interpretive panel designed by youth for display in LCNCA

- Empire Ranch Roundup, western cultural heritage event – November 5, 2011. Held at Empire Ranch Headquarters; approximately 3000 participants. BLM staff provided security, assisted with planning and logistics, and staffed an information booth that provided maps, brochures, and handouts.
- Legacy Day Western Heritage Education program for Elgin Middle School in May 2011. Approximately 75 local students, teachers, and parents learned heritage skills including adobe brick-making, and participated in preservation efforts.
- Volunteer Work days -- BLM/FS Shared Services Historic Preservation Specialist facilitated 10 volunteer work days during FY2011 in collaboration with ERF. At least five of these comprised 25+ volunteers, including a workshop in appropriate materials and techniques for undertaking preservation efforts on Federally-managed historic properties.
- Annual Collaborative Planning – held at BLM Tucson Field Office, July 2011. This annual planning workshop includes the Empire Ranch Foundation Board, BLM-TFO staff, and other stakeholders. “Big picture”, long-range strategies are developed in areas of resource preservation; public access and interpretation; educational outreach; federal, private, and grant funding sources; etc. Results provide the framework for short- and long-term goals and objectives.

4. Science

Wildlife Inventory

Annual inventories for Chiricahua leopard frog, Gila topminnow and Gila chub continue. Additionally, surveys for southwestern willow flycatcher are conducted annually and a Monitoring Avian Productivity and Survivorship (MAPS) station is established on site and surveyed annually.

Riparian Inventory

Riparian areas have continued in a stable or upward trend on Las Cienegas NCA since designation. The endangered Huachuca water umbel is also monitored during the annual wet/dry, where staff walks the entire distance of the creek and measures where water flows above ground.

Upland Inventories

Upland area monitoring is tied to the Arizona Standards for Rangeland Health and several RMP objectives for upland vegetation including these objectives for ground cover:

- Maintain <30% exposed soil surface (bare ground) in grassland communities; and
- Maintain >10% live basal cover of perennial grasses.

The first objective is set forth in the RMP to guard against soil erosion and promote watershed health as a whole. The second objective is used by the BLM and the upland technical team as an interim objective for Las Cienegas NCA's grasslands, pending finalization of more site-specific objectives for particular rangeland ecological sites, which were drafted in 2010.

Reintroduction of Key Species

The black-tailed prairie dogs project continued on Las Cienegas NCA in 2011. For a detailed look inside this project, go to:

http://www.azgfd.gov/w_c/nongameandendangeredwildlifeprogram/Black-tailedPrairieDog.shtml

BLM and Arizona Game and Fish Department continue to pursue establishment of additional populations of native fish and frogs.

Arizona Game and Fish are planning to reintroduce turkeys in 2012.

Watershed Restoration

District fire staff and ARRA contracts were involved in mesquite removal on the area since 2006. In FY11, 1,059 acres of mechanical mesquite removal was accomplished, there were no prescribed fire nor any chemical eradication of mesquite performed in 2011.

In 2011, several of the mesquite removal contracts ended and the BLM interdisciplinary team met several times to reevaluate the mesquite project and made several changes to conditions and stipulations for future contracts, mostly as it relates to locations of mesquites in the uplands, and avoiding removing mesquite in drainages and other “bosques” or mesquites growing within riparian locations.

Ongoing scientific efforts:

Las Cienegas National Conservation Area Fiscal Year 2011 Science Efforts				
Project Name and Description	Scientific Discipline	Research Contributor/Collaborator	Land Management Applications	Products
Mapping Vegetation States using Remote Sensing	Natural Resources	Dr. Chandra D. Holifield Collins Soil Scientist USDA-Agricultural Research Service Southwest Watershed Research Center	Monitor vegetation trends	Scientific Report
LCNCA Breeding Ecology of Arizona Grasshopper sparrows	Wildlife Biology	USGS	Describe habitat use and breeding ecology	Report
Assessing Black-tailed Prairie Dogs on LCNCA	Wildlife Biology	University of Arizona	Study of success of reintroduction	Report

5. Partnerships

Ongoing partnerships:

Partnership Accomplishments Las Cienegas National Conservation Area			
Fiscal Year 2011 Partnership Accomplishments			
Partner(s)	Project Name and Description	Accomplishments	Monetary and In-Kind Contributions
Empire Ranch Foundation	Historic Ranch Preservation and Adaptive Reuse	Preservation of Historic Structures – Adobe hay barn Seismic Repairs and Maintenance of Historic Structures	Volunteer time valued at \$102,000
Sky Island Alliance	Arroyo Restoration Building erosion control projects	Stabilization of highly erosive areas	Volunteers time valued at \$12, 000
The Nature Conservancy, Arizona	Ecosystem Monitoring on Las Cienegas NCA	Ground Water Monitoring Program, Vegetation Treatment Monitoring. Climate Change Adaptation work with sacaton grasslands.	N/A

6. Planning and Business Practices

The LCNCA RMP was developed through an intensive collaborative effort with partners. Partners are helping implement many projects within LCNCA.

7. Manager's Corner:

I would like to personally thank the following staff for their participation in creating this document.

Catie Fenn - Outdoor Rec Planner
 Marcia Radke – Wildlife Biologist
 Heather Swanson – Natural Resource Specialist
 Jim Mahoney – Outdoor Recreation Planner
 Ben Lomeli – Hydrologist
 Karen Simms – Acting Assistant Field Manager
 Jeff Simms – Wildlife Biologist
 Chris Schragar – Historic Preservation Specialist
 Bob Steele – Park Ranger
 Jody Barker – Public Contact Representative
 Amy Markstein – STEP Student

State Name: Arizona
 Unit: Las Cienegas NCA
 Manager: Markian Rekshynskij

Table 1: SCIENCE (table continues on next page, please scroll to the right)										
Location	Project Name	Discipline	Research Contributor/ Collaborator/	Project Description	Status	Products	Applications	Outreach Options	BLM Contributions	Partner Contributions
		<i>Geology, Paleontology, Hydrology,</i>			<i>Ongoing, 1st year, or completed</i>	<i>Provide citations and web addresses where applicable</i>	<i>How the research has or will be used</i>	<i>Identify projects or stories that may be of interest to the public</i>	<i>To date by year</i>	<i>To date by year</i>
Las Cienegas National Conservation Area, AZ	Reintroduction of Black Tailed Prairie Dogs	Wildlife	Az Game and Fish	After the 3rd release site, biologists monitored species brought in from Mexico, to reduce mortality, supplemented sites with feed tablets.	Ongoing	http://www.azgfd.gov/w_c/nongameandendangeredwildlifeprogram/Black-tailedPrairieDog.shtml	to determine if Key species can be successfully reintroduced	Most youth science based tours involve a interpretive talks and visits to sites.		
Las Cienegas National Conservation Area, AZ	Monitoring the effects of surface water reduction on bird populations at Las Cienegas NCA,	Wildlife	School of Natural Resources and the Environment 325 Biological Sciences East University of Arizona Tucson, AZ	This project will support an existing groundwater monitoring study at Las Cienegas NCA currently being conducted by the University of Arizona and USGS. The study is developing a model to predict the effects of future groundwater depletion (via drought, or groundwater pumping elsewhere in the watershed) on abundance and diversity of birds and insects	Ongoing	http://www.cals.arizona.edu/research/azfwru/cic/	This information will directly benefit the implementation of an adaptive management strategy for Las Cienegas NCA as prescribed in the recently completed Las Cienegas RMP. The goal of the monitoring plan for Las Cienegas NCA (LCNCA) is to ensure both short- and long-term protection of the area's significant natural resources under a flexible, multi-use management plan.		\$24,000	
Las Cienegas National Conservation Area, AZ	Use of LiDAR to monitor changes in Vegetation and Stream-channel geomorphology at Las Cienegas NCA	Riparian		This project will use an emerging technology, light detection and ranging (LiDAR), to inventory baseline conditions of two focal resources at the Las Cienegas NCA (LNCA): vegetation and stream-channel morphology.	Ongoing					

Las Cienegas

Las Cienegas National Conservation Area, AZ	Wildlife Tracking	Wildlife	Sky Island Alliance	The overall goal of the project is to be able to monitor 4 active 1.5 mile long tracking transects in Las Cienegas NCA as part of a larger wildlife tracking monitoring project along the Cienega Corridor. By providing scientific data on tracking, the work on Las Cienegas will be used to protect and restore the movement and dispersal of native plants and animals, and to reduce threats and barriers to landscape permeability	Ongoing	http://swbiodiversity.org/seinet/index.php				
Las Cienegas National Conservation Area, AZ	Las Cienegas Hands on Land	Riparian	Tucson Audubon	effectively collect riparian monitoring data while introducing youth to careers in natural resource management.	Ongoing		The Tucson Field Office has been working with Audubon Arizona and Tucson Audubon Society to pilot the River Pathways program in Tucson, Arizona. River Pathways was developed in Phoenix as a partnership between the Hassayampa Field Office and Audubon Arizona as a way to effectively collect riparian monitoring data while introducing youth to careers in natural resource management.			

State Name: Arizona
 Unit: Las Cienegas NCA
 Manager: Mark Rekshynskyj

Table 2: PARTNERSHIPS (table continues on next page, pleas scroll to the right)								
Location	Project Name	Partners	Project Description	Status	Results	Outreach Options	BLM Contribution	Partner Contribution
						<i>Identify projects or stories that may be of interest to the public</i>	<i>Funding To date by year</i>	<i>To date by year</i>
Las Cienegas NCA		Empire Ranch Foundation	Hands on Land: Wild about the Grasslands Program	Ongoing	Youth Leadership Training	Introduction to proper steward management of public lands. Creating youth community leaders with a science based philosophy.	\$11,000	\$6,500
Las Cienegas NCA		Empire Ranch Foundation	Historic Ranch Preservation and Adaptive Reuse	Ongoing	Preservation of Historic Structures – Adobe hay barn Seismic Repairs and Maintenance of Historic Structures	Preserve American History and the "Old West" ranching community	\$16,800	\$18,000
Las Cienegas NCA		Cienega Watershed Partnership and Sky Island Alliance	Arroyo Restoration Stewardship Workshops – Building erosion control projects	Completed	Stabilization of highly erosive areas	Utilizing Science and ancient forms of how to stabilize erosion with minimal effort	\$10,000	Volunteers time valued at \$12, 870
Las Cienegas NCA		Cienega Watershed Partnership, National Audubon Society (Appleton-Whittell Research Ranch)	FROG Project: Actions to help recover threatened Chiricahua leopard frog in the watershed; and Lehmann's lovegrass annotated bibliography	Ongoing	Managing headstart facility; controlling bullfrogs; reintroductions at refugia sites	Introduction of Native Species	\$23,700	\$23,700*

Las Cienegas

Las Cienegas NCA		Cienega Watershed Partnership, National Audubon Society	Sonoita Valley Planning Partnership and Cienega Corridor Conservation Council	Ongoing	Managing collaborative efforts with other partnership groups, application for grant funding, management of grant funding, Facilitating SVPP and CCCC Forums, Science on the Sonoita Plain Symposium, Oral History Workshops, and Wet-Dry Riparian Monitoring	Provide partnership support to BLM and surrounding communities.	\$32,500	Volunteers time valued at \$10,000
Las Cienegas NCA		The Nature Conservancy, Arizona	Ecosystem Monitoring on Las Cienegas NCA	Ongoing	Development of Ground Water Monitoring Program, bibliography of Hydrology references, compiled all flow, groundwater, and wet-dry data, wells database. Vegetation Treatment Monitoring. Climate Change Adaptation work with sacaton grasslands.	Providing hydrological data on Las Cienegas NCA.	\$150,000	\$20,000

