



**NATIONAL
CONSERVATION
LANDS**

Arizona

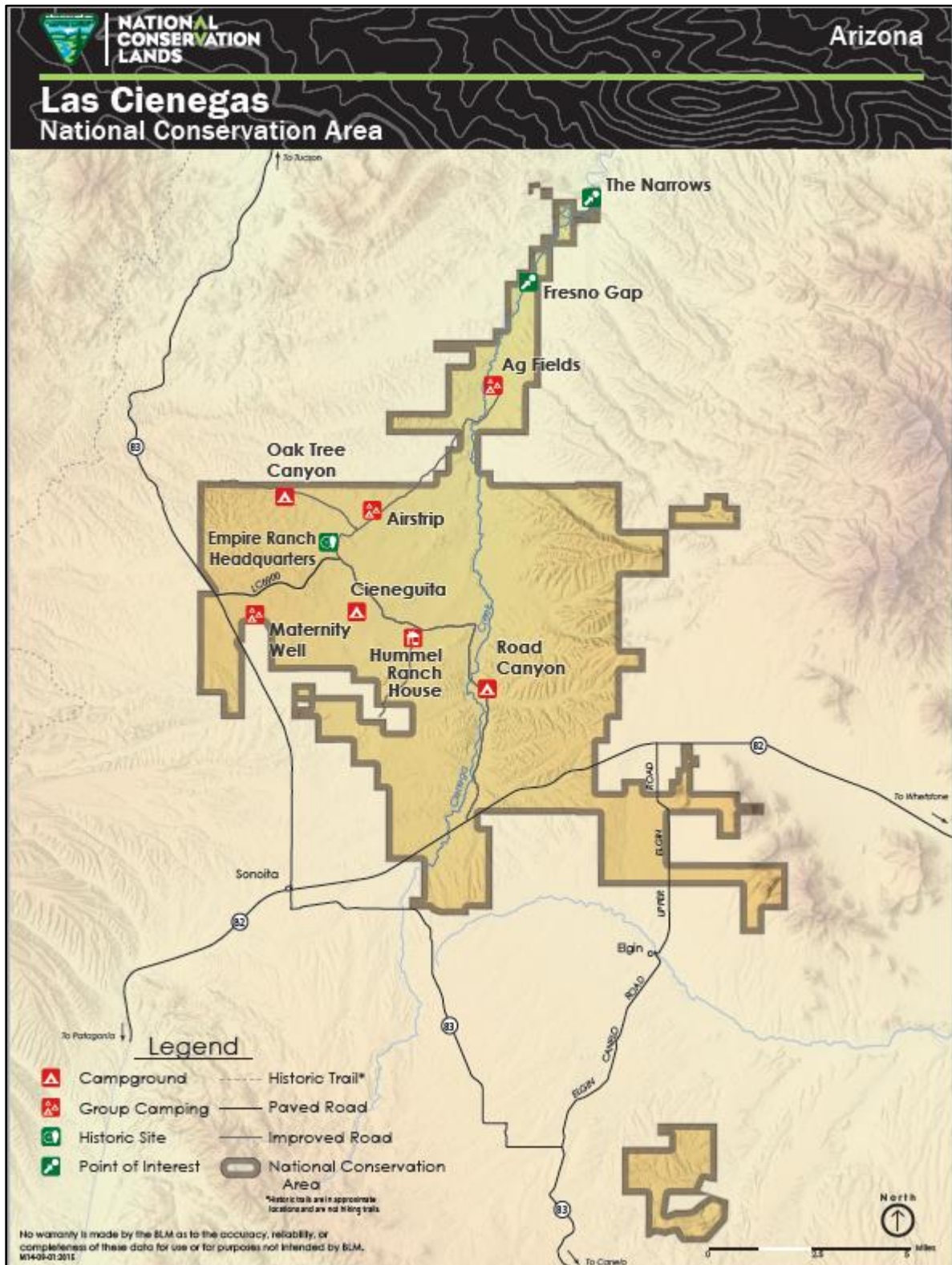
2023: Annual Manager's Report

Las Cienegas

National Conservation Area



Map



Accomplishments

In 2023, the Bureau of Land management (BLM) Tucson Field Office (TFO) staff, along with numerous partners and volunteers, provided continued opportunities for the public to use and enjoy the Las Cienegas National Conservation Area (Conservation Area) while protecting and enhancing important resources. The Conservation Area contains over 47,000 acres of some of the most biologically rich and ecologically diverse biotic communities in the world. The BLM's management of the Conservation Area brings together partners to conserve and enhance local ecosystems while providing opportunities for collaborate conservation stewardship and recreation. A few of the many accomplishments achieved in Fiscal Year 2023 are highlighted below.

Conservation Area Native Fish Surveys

- Fish surveys and aquatic habitat assessments were conducted in the fall on Cienega Creek and Mattie Creek to screen for presence of nonnative fishes and to monitor trends in the native fish populations. During October 2022 three native fish populations, Gila topminnow (endangered), Gila chub (endangered), and longfin dace (BLM sensitive species), were monitored with the assistance of BLM staff and volunteers. This aquatic system is also home to a variety of other species such as Sonoran mud turtle (BLM sensitive species), Chiricahua leopard frog (threatened), lowland leopard frog (BLM sensitive species), and northern Mexican gartersnake (threatened).



- In Mattie Creek, nine previously inventoried pools (a minimum of 2 feet in depth) had filled in with sediment from erosion. Pool habitat is essential for the survival of adult Gila chub. Three new pools were inventoried in Mattie Creek. One yielded over 150 Gila chub of various size classes. The pools in Cienega creek exhibited similar sedimentation as Mattie Creek. The chub populations appear stable with representation of all size classes. No non-native fish were detected during surveys.

Huachuca Water Umbel (HWU) Surveys

- In May 2023, BLM staff and interns conducted surveys for the endangered HWU plant on Cienega Creek, Mattie Creek, and Empire Gulch in the Conservation Area. HWU is a small, perennial aquatic plant that inhabits perennial, shallow water. The team surveyed over nine miles of Cienega Creek with perennial flow or perennially moist soil, one mile of Mattie creek, and one mile of Empire Gulch and recorded 150 metapopulations/patches: 124 along Cienega Creek, 25 in Empire Gulch, and one in Mattie Creek. The plant is rhizomatous, so individual plants are near impossible to distinguish.



Metapopulations or “patches” are recorded. HWU patches varied greatly in length, usually ranging from 25 centimeters to several meters, with the largest continuous patch covering 80 meters! The last survey at the Conservation Area for HWU was in 2016. This year, HWU was found in parts of the creek where the plant was not previously recorded.

Planting endangered Arizona Eryngo (*Eryngium sparganophyllum*) in the Conservation Area

- In September 2023, nine TFO staff and volunteers planted Arizona eryngo (endangered). Arizona eryngo is an herbaceous plant that grows in the wetlands of the Sonoran Desert. Only four natural populations are known to exist, two in southern Arizona and two in Sonora, Mexico. As part of an ongoing effort to establish new populations of Eryngo in suitable habitat over 100 individual plants were planted at Coldwater Wetland and Maternity Well. Mature plants from previous plantings are established at Cieneguita Ponds, Empire Gulch, and Coldwater Wetland.



Challenges

Primary challenges include the threat of wildfire and damage to both cultural and natural resources from unpermitted activities and over-use due to unprecedented numbers of visitors and recreational vehicles. Monsoon rain events in 2021 resulted in damages to fences in the Conservation Area. These damages are still being assessed. Another ongoing challenge is limited access to lower Cienega Creek due to road damage.

Visitors

In FY 2023, visitations increased by 50 percent over 2022. Approximately 160,422 visitors made their way to the Conservation Area in fiscal year 2023. Visitor data was recorded with traffic counters at several locations throughout the Conservation Area, recreation field monitoring by BLM staff and volunteers, and visitation numbers recorded at the Empire Ranch from docent and visitor contact station volunteers. Partner data indicated that Conservation Area had 400 education participants, 2,100 interpretive participants, and a total of 7,200 volunteer hours.

TFO staff administered 28 Special Recreation Permits in the Conservation Area. Permitted activities included equestrian rides, all-terrain vehicle tours, bird dog field trials, guided hunting trips, and recreation events.

Partnerships

[Cienega Watershed Partnership](#)

Formed in 2006, the Cienega Watershed Partnership is a nonprofit organization whose mission is to coordinate and help resource landscape stewardship initiatives for the landscape region that runs from Saguaro National Park and the Rincon Wilderness to the Canelo Hills south of Sonoita, and from the crown of the Santa Rita Mountains east to the crown of the Whetstone Mountains. The Cienega Watershed Partnership also coordinates the activities of two *ad hoc* organizations: the Sonoita Valley Planning Partnership and the Cienega Corridor Conservation Council. The Cienega Watershed Partnership projects include YES!, FROG, Oral History, and Back Then. The Cienega Watershed Partnership supports the annual Science on the Sonoita Plain Meeting, the State of the Watershed Workshops, and the Biological Planning meetings. Additionally, they worked with TravelStoryGPS to create an [interactive audio tour](#) of the area and a video titled [To the rescue of Arizona's waterways](#) which feature Cienega Creek with the Conservation Area. The Cienega Watershed Partnership has been instrumental in assisting with monitoring leopard frogs, removing bullfrogs and crayfish on BLM and adjacent private lands, maintaining water supplies at wildlife waters, and reintroducing Chiricahua leopard frogs grown from University of Arizona grown stock.

[Empire Ranch Foundation](#)

The Empire Ranch Foundation is a non-profit volunteer organization established in 1997. Acting in cooperation with the BLM, Empire Ranch Foundation's purpose is to protect, restore, and sustain Empire Ranch historical buildings and landscape as an outstanding western heritage and education center. The beneficial relationship between the BLM and Empire Ranch Foundation was formalized through an Assistance Agreement. To ensure mutual understanding of roles and responsibilities, a Memorandum of Understanding (non-monetary agreement) is in the process of being finalized between BLM and Empire Ranch Foundation. The Empire Ranch Foundation receives funding through the support of its members, individuals, and businesses, through public donations, corporate and foundation contributions, and grants, and through the proceeds of special fundraising activities.

The Empire Ranch Foundation provides staffing for the Huachuca House Visitor Contact Station at the Empire Ranch Headquarters several times a year. Docent tours are offered twice monthly, in addition to cultural events such as the annual Empire Ranch Cowboy Festival, which typically brings over 2,500 visitors to the Conservation Area during the two-day event. Volunteer workdays are held every month to support maintenance and preservation efforts. The Empire Ranch Foundation provided approximately 4,000 hours of volunteer service during fiscal year 2023.

University of Arizona

Nonnative bullfrogs were suppressed again in the basin surrounding the Conservation Area to maintain a bullfrog-free aquatic habitat for threatened and endangered species conservation through a cooperative agreement with the University of Arizona. Bullfrogs nearly eliminated the populations of both Chiricahua leopard frogs and aquatic garter snakes from the area, but TFO staff working through partners and the Arizona Game and Fish Department had eliminated them from the Conservation Area by 2015. Invasive, nonnative species such as bullfrogs, crayfish, and some fish are continually being monitored both on the Conservation Area and on adjacent private land. These nonnative species are suppressed by partner groups with financial assistance from BLM and the Arizona Game and Fish Department. As a result of these efforts Cienega Creek, its tributaries, wildlife ponds, and wetlands are free of aquatic invasive species, a rarity in waterbodies of the southwest.



Annual Bio-planning Meeting with Partners

- The BLM and numerous partners met in December 2022 for the annual bio-planning meeting to share technical team and partner updates on project work in the Conservation Area. Members took a field trip to the Conservation Area to view the permitted grazing operation, vegetation treatment areas, erosion control work and an archeological site. Members also heard from the Fort Huachuca Sentinel Landscape (FHSL) Coordinator Amber Morin on an overview of the Sentinel Landscape how partner work in the Conservation Area supports the larger Sentinel Landscape. The Conservation Area is part of the larger FHSL. The two-day session

was a great opportunity to share the work that has been done and plan for future work the will further benefit the landscape.



Science

Current research efforts conducted within the Conservation Area are summarized below.

Cultural:

- Cultural resource research is focused on identifying and evaluating early agricultural period archaeological sites through the Cienega Watershed Partnership.

Botanical Projects:

- Arizona eryngo, listed as an endangered species in 2021, was reintroduced into Las Cienegas wetlands.

Wildlife:

- Slevin's bunchgrass lizard (*Sceloporus slevini*) study was performed by Christian d'Orgeix of Virginia State University on the Conservation Area. The collected data can be used to predict the future prognosis of the lizard.

Soil:

- Soil sampling will be conducted by Richard Lance of Environmental Laboratory to complete eDNA research on the Conservation Areas in the TFO and other BLM areas. DNA will be extracted from each soil sample and remains of the sample will be utilized to determine soil structure and chemistry characterization.

TFO Cienega Creek Wet-Dry Assessment

- Each summer before the monsoon season, the TFO maps and measures the length of wet and dry areas along Cienega Creek. This important effort documents the retraction of water during the hottest and driest time of the year. Annual mapping of perennial surface waters and helps managers understand effects of various factors on stream systems and the wildlife that depends upon them. In June, a team of BLM employees, as well as Arizona Game and Fish staff, conducted the annual wet-dry surveys on Cienega Creek. In total 17.1 miles of Cienega Creek, Empire Gulch and Mattie Canyon were surveyed. Almost nine miles were wet. Late spring rains may have contributed the length of wet areas. In contrast, wet areas covered just over four miles of the same reaches in 2021. The general trend of wet areas has slightly increased over the last 17 years, though still less than the area covered by surface water in the 1990s.



Climate Impacts

The Conservation Area and surrounding area continues to be in a state of drought as it has been for the last 20 years. During a recent state of the watershed report, data compiled by the Cienega Watershed Partnership indicated that in this persistent drought, Conservation Area has had short term swings to less drought particularly in winter months. Indicators across the landscape have been monitored annually for the last two decades. Water indicators include wet-dry mapping, monthly discharge measurements within the Conservation Area along with quarterly ground water monitoring wells. Data shows that conditions are stable in the short term but overall declining during the same time as reported drought conditions. The water condition directly impacts threatened and endangered species recovery efforts in the Conservation Area.

Climate Resiliency

Assessment, Inventory and Monitoring (AIM) for both wetlands and uplands is leading to direct annual adjustment to work plans including grazing practices and vegetation treatments across the landscape.

Funding provided by the Bipartisan Infrastructure Law and the Inflation Reduction Act will enhance Chiricahua leopard frog habitat in wildlife ponds and along Cienega Creek.

In March, a prescribed fire was initiated to improve vegetation by reducing the canopy cover of shrub and tree species and increasing the density of native perennial grasses to benefit pronghorn antelope. The Gila District fuels program successfully completed a prescribed burn of 758 acres near the Airstrip Group Campground. Prescribed fires were intended to mimic natural fire frequency and intensity. They are intended to improve the health of the land by stimulating growth of desirable grasses, reducing invasive plants and managing fuel loads so that natural fires are less destructive. The fire removed residue from an earlier mesquite thinning project and rejuvenated the surrounding grasslands. This fire treatment was part of a long-term collaborative conservation stewardship effort to conserve the natural values of the area.

In Fiscal Year 2023, the BLM completed 758 acres of prescribed burning, 696 acres of mechanical mesquite thinning, and 374 tons of bio-mass utilization during grassland restoration and wildlife habitat improvement treatments on the Conservation Area.



Social and Environmental Justice

Special recreation permits increased significantly over the last year with recreational events (i.e. bike races and club camping) along with outfitter guide services seeing the largest increase. Although stewardship engagement program participation has declined since COVID, it has remained level over the last three years.

Fifty-five free or low-cost firewood gathering permits were issued to benefit residents of the local communities and tribes.

Consultation with 12 federally recognized tribes is maintained on a consistent basis to ensure that proposed uses and enhancements are carefully analyzed with tribal viewpoints incorporated into the decision-making process. Consultation occurred on the implementation of vegetation treatment projects planned for 2024.

Events

The Empire Ranch Foundation hosted several events in fiscal year 2023 including the Empire Ranch Cowboy Festival, Christmas at the ranch, western movie showings at the ranch, a spring Trail Ride, and national day of the cowboy. In total, these events drew more than 3000 visitors, who enjoyed learning about the history and western ranching heritage of southern Arizona. BLM staff supported the events by educating attendees on the BLM's mission, Gila District operations, and recreational opportunities within the Conservation Area.

In 2023 Southern Arizona Quail Forever hosted its annual family day and drew more than 200 visitors at the Airstrip Group Site to participate in outdoor educational skills such as firearms safety, archery demonstrations, using GPS, wildlife identification, Leave No Trace etiquette, and off-highway vehicle (OHV) education.

The TFO hosted a rangeland health training for BLM staff, which included a visit to the Conservation Area where students evaluated rangeland conditions on grazed land and in an exclosure area. The BLM's National Wildlife Program also toured the Conservation Area in FY23. Wildlife Program leads along with Arizona State Office Program leads learned about the numerous conservation and recreation partnerships that support the Conservation Area resources and the collaborative work that benefits the Fort Huachuca Sentinel Landscape.



NATIONAL CONSERVATION LANDS

Las Cienegas National Conservation Area

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[Las Cienegas NCA | Bureau of Land Management \(blm.gov\)](#)
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