



NATIONAL CONSERVATION LANDS

Utah
2022: Annual Manager's Report

Red Cliffs

National Conservation Area



Map

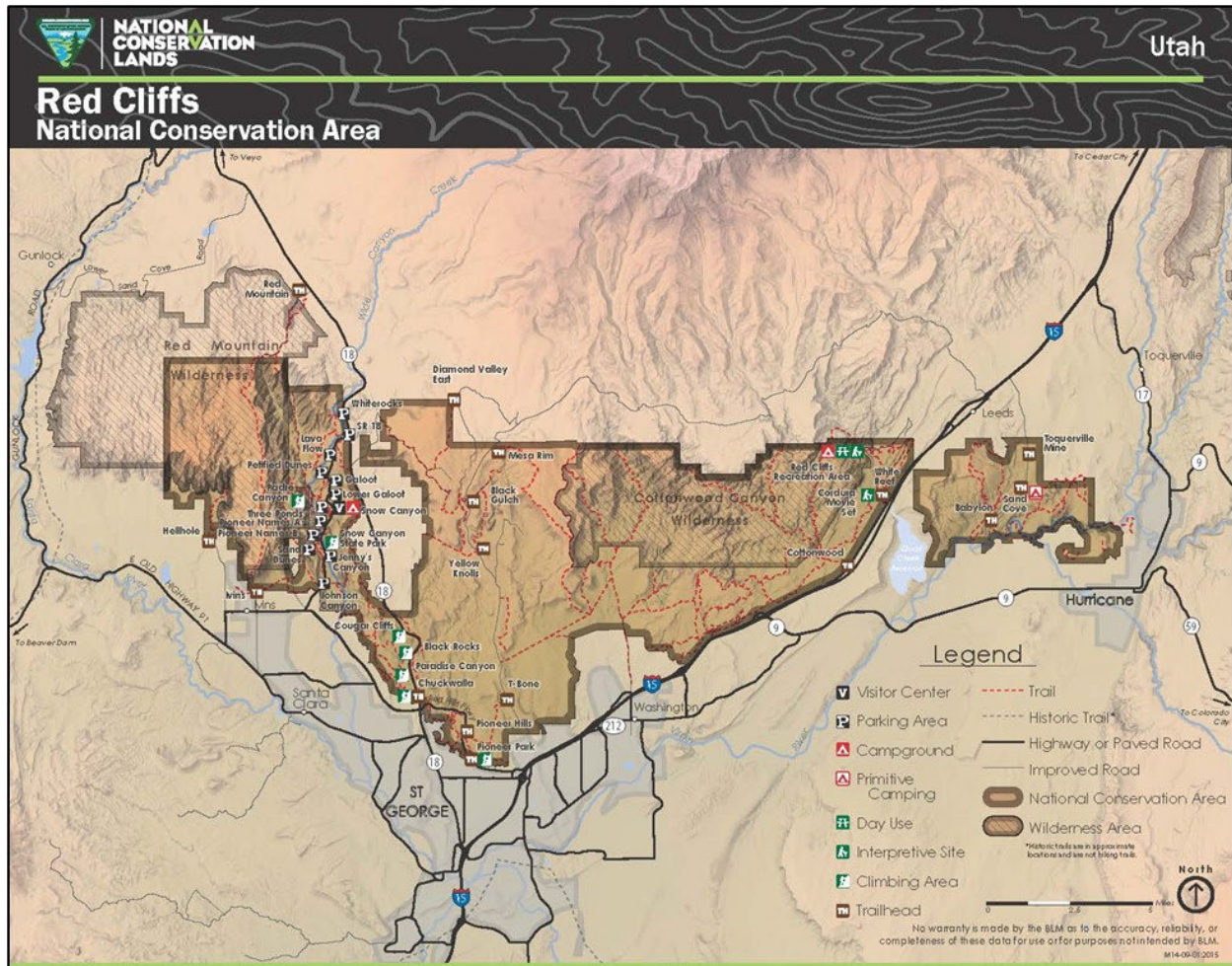


Figure 1: Map of the Red Cliffs National Conservation Area.

Accomplishments

In Fiscal Year (FY) 2022, the Bureau of Land Management (BLM) completed the first five-year Evaluation Report for the 2016 Red Cliffs NCA Resource Management Plan (RMP). The Report concluded that the RMP management decisions remain valid, the analysis supports the decisions, and the minor text edits needed for clarification could be made through plan maintenance.

An Integrated Weed Management Plan (IWMP) for the control and eradication of noxious and invasive species for the Beaver Dam Wash NCA and the Red Cliffs NCA, supported by a programmatic environmental assessment, was released for public review and approved by the NCA Manager. The IWMP incorporates education, prevention measures, and best management practices to reduce the introduction and spread of noxious weeds and invasive species. It also allows for treatment methods in the NCAs that will achieve the best possible combination of control and cost-effectiveness, while minimizing risks to public health and NCA resource values.

During FY 2022, the NCA Archeologist, assisted by qualified volunteers, completed field investigations on the Cottonwood Bench, within the Cottonwood Trail fire perimeter. This 2020 fire burned off much of the native shrub cover, exposing previously unrecorded archeological sites and making them more vulnerable to vandalism. The team recorded 15 sites, including the ditches, rock walls, and cleared fields of a previously unrecognized late 19th-early 20th century rural historic landscape associated with the Mormon settlement at Harrisburg, Utah. They also documented six USDOI Division of Grazing metal signs on posts, installed by a Civilian Conservation Corps crew in 1937, to mark the boundaries of the St. George-Cedar City Stock Driveway.



Figure 2: Field work to record historic sites on Cottonwood Bench in the Red Cliffs NCA.

Challenges

The greatest challenges for this NCA continue to be protecting and restoring critical habitats for at-risk wildlife species, including the Mojave desert tortoise, in the face of climate change and catastrophic wildfires. Lower elevations of the NCA are primarily within the Mojave Desert ecoregion, where wildfires were formerly a rare occurrence. Some desert shrubs, like creosote bush, are naturally fire-resistant and widely spaced apart, impeding fire spread. Invasive annual brome grasses today fill in the gaps between individual plants, creating a highly flammable fine fuel source that is increasing the size, intensity, and frequency of wildfires. Critical habitat loss is complicating recovery efforts for the threatened desert tortoise and other native species. The BLM continues to conduct research, working with multiple federal and non-federal partners, to evaluate the most successful and cost-effective ways to rehabilitate fire-damaged desert vegetation communities in the NCA.



Figure 3: top, conservation crew hand planting during fire restoration efforts; bottom left, wildfire within the NCA; bottom right, desert tortoise killed by wildfire.

Visitors

In FY 2022, over 625,000 visits were recorded to the NCA, a 93% increase compared to FY 2021 levels. Residents and visitors to the area enjoy the open space and outdoor recreation opportunities that are available in the NCA, including hiking, mountain biking, and equestrian trail riding on over 130 miles of designated non-motorized trails; camping in developed and primitive campgrounds; backpacking in the Cottonwood Canyon and Red Mountain Wilderness areas; and rock climbing at multiple designated climbing sites—all just a few minutes' drive from downtown St. George. Many of the 46 Special Recreation Permit (SRP) holders who operate in the NCA offer commercial guiding services for rock climbing, mountain biking, and equipment rentals and shuttles to trailheads.



Figure 4: Popular recreational activities in the Red Cliffs NCA, Utah.

Partnerships

During FY 2022, the following partners assisted NCA staff with resource conservation, monitoring, and restoration projects: Conserve Southwest Utah, the Backcountry Horsemen of America - Southwest Utah Chapter, the National Park Service - Lake Mead National Recreation Area's Song Dog Native Plant Nursery, Utah Tech University, the Utah Conservation Corps, and the American Conservation Experience (ACE).

A new Cooperative Assistance Agreement was signed with Utah Division of Wildlife Resources (UDWR) to continue long term desert tortoise population trend monitoring in the NCA. In 2023, the BLM and UDWR will jointly fund a field crew to collect population estimates through line distance sampling transects to augment similar data collected over the past 25 years. This field work will also assess the direct and indirect effects of the 2020 wildfires on tortoise populations and collect data on BLM sensitive species occurrence and habitat use.

In partnership with NCA staff, biologists from UDWR completed annual population and habitat monitoring for mule deer, Gambel's quail, mourning dove, Virgin spinedace, Mojave desert tortoise, Southwestern Willow Flycatcher, Western Yellow-billed Cuckoo, Virgin River chub, and Woundfin.



Figure 5: American Conservation Experience (ACE) crew taking a break from restoration work in wildfire-damaged areas of Red Cliffs NCA.

Science

During FY 2022, the NCA Biologist, assisted by ACE Biological Resource Associates, continued a long-term monitoring program for Mojave desert tortoise, Gila monster, bat species, and other BLM sensitive species, conducting field surveys and using acoustical monitoring devices to detect and identify bat calls in the NCA. The goals of this program are to determine the current distribution, abundance, age structure, diet, home range, and habitat use of at-risk species, to provide baseline information from which to evaluate future trends and attainment of NCA management goals. This effort will benefit declining populations of BLM sensitive species, potentially reducing the need for listing under the Endangered Species Act.

During spring of 2022, NCA/SGFO staff, assisted by ACE Biological Resource Associates, conducted twenty-eight 10-minute raven point-count surveys in the NCA, as part of a larger interagency study to determine raven density and raven-Mojave desert tortoise predation pressure within the Upper Virgin River Recovery Unit (UVRU). Raven predation risk within the NCA was estimated to be only 5.2%, which is less than the USFWS 7.8% adaptive management target. Additional surveys are required to determine raven density and changes in predation pressure over time, and to assist development of management strategies to address high raven density/predation pressure areas (e.g., near Warner Valley/the Sand Mountain Recreation Area, which are outside of the NCA) and to reduce harmful human-provided raven subsidies in the UVRU.

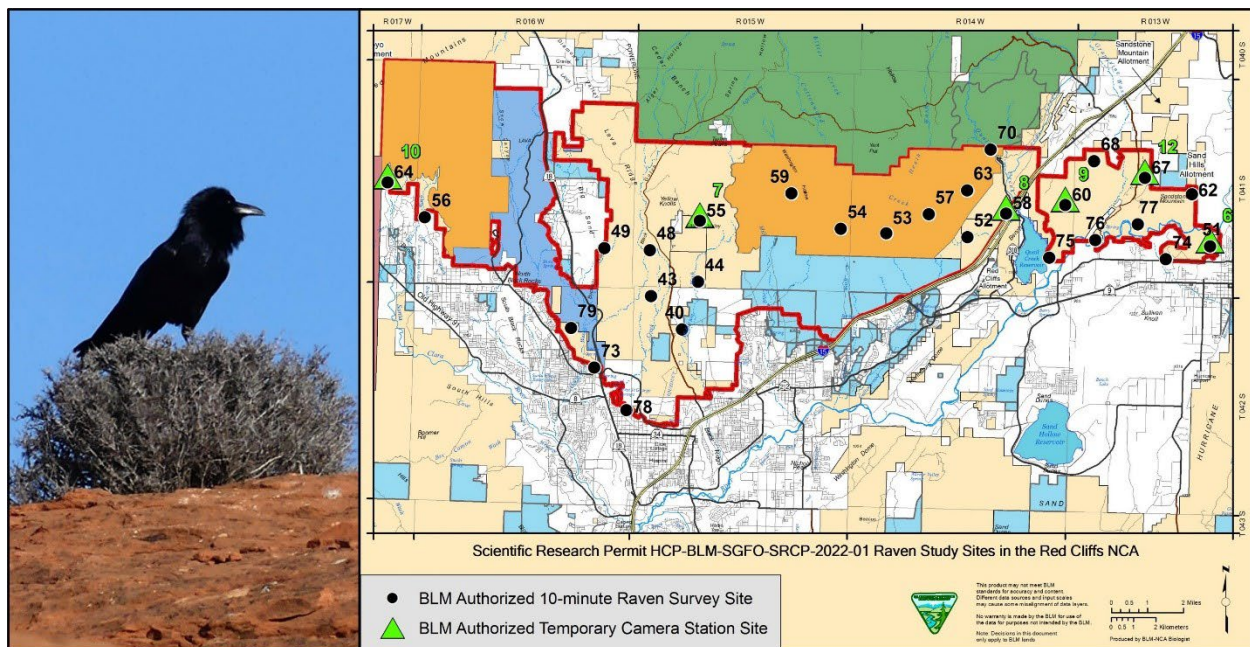


Figure 6: left, common raven; right, map of 2022 raven survey sites within Red Cliffs NCA.

Climate Impacts

Elevated annual temperatures, drought, erratic precipitation events, and more frequent wildfires are altering the native vegetation communities of the NCA. Invasive annual brome grasses have proliferated after fires, outcompeting native species, and are contributing to increases in wildfire frequency, extent, and intensity. Climate impacts are threatening ecosystem integrity and resiliency in the NCA.



Figure 7: Human-caused wildfire in Mojave desert tortoise habitat in the NCA in 2020.

Climate Resiliency

The NCA staff collect climate data using a solar powered HOB0 weather station and precipitation measurement gauges set up at various locations in the NCA. On-going efforts to create more climate resilient landscapes include large and small-scale habitat rehabilitation research projects that focus on planting mature, nursery grown native species to create “fertile islands” in fire-damaged areas. Plant survivorship is measured during these projects, as it is critical to determination of which native species can be successfully and cost-effectively used in fire-damaged vegetation communities.



Figure 8: Habitat restoration and research project hand planting native species within fire-damaged areas of Red Cliffs NCA.

Social and Environmental Justice

Youth corps crews from ACE assist NCA staff with habitat rehabilitation projects in fire-damaged tortoise critical habitat in the NCA. ACE Emerging Professional's in Conservation (EPIC) Resource Associates complete internships with the NCA Biologist, gaining field and office experiences in wildlife and threatened and endangered species population and habitat condition monitoring. Both ACE programs provide young professionals with "on the ground/in the field" experiences that support their development as future conservation leaders and federal agency employees. Ethnically and socially diverse candidates are recruited by ACE for its programs, helping to meet BLM's objectives of providing meaningful project and internship experiences for youth corps members, supporting diversity, and fostering a sense of public land stewardship in future generations.



Figure 9: ACE crew members planting native plants in fire-damaged desert tortoise habitat within Red Cliffs NCA.

Events

The NCA Park Rangers hosted the 8th Annual Dinosaur Discovery Event in the Red Cliffs Recreation Area of the NCA to celebrate National Fossil Day on October 13. More than 65 members of the public attended, learning about the diversity of Early Jurassic age dinosaurs whose tracks are exposed in the NCA. Park rangers described the environment and species that roamed southwestern Utah 200 million years ago and displayed casts of three-toed dinosaur tracks. A “hands on” activity for children allowed them to make their own track casts, filling molds with a flour and water paste that quickly hardened into a cast. Participants were also given directions to a track site with interpretive panels in the recreation area campground and to other trackways that are exposed on the Red Reef East Trail.



Figure 10: BLM park ranger instructing children on making casts of dinosaur tracks at the 8th Annual Dinosaur Discovery Event in the Red Cliffs Recreation Area.



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