NATIONAL CONSERVATION LANDS

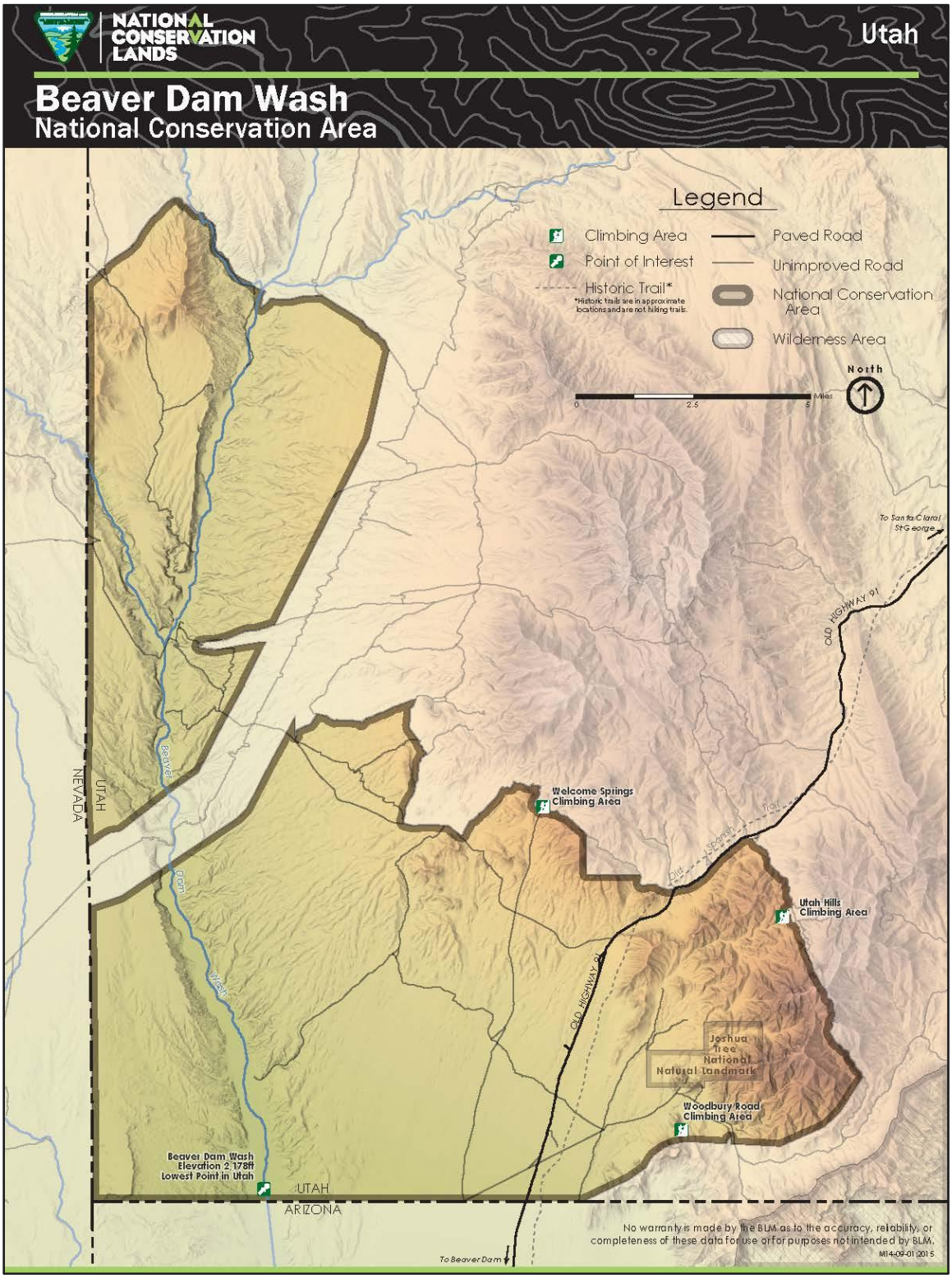
Utah

2021: Annual Manager's Report

Beaver Dam Wash

National Conservation Area

Map


NATIONAL CONSERVATION LANDS
Utah
Beaver Dam Wash
National Conservation Area
Legend
Climbing Area
Point of Interest
Historic Trail*
*Historic trails are in approximate locations and are not hiking trails.
Paved Road
Unimproved Road
National Conservation Area
Wilderness Area
North
0
2.5
5
Miles
To Santa Clara/ St George
OLD HIGHWAY 91
Welcome Springs Climbing Area
Old Spanish Trail
Utah Hills Climbing Area
Joshua Tree National Natural Landmark
Woodbury Road Climbing Area
Beaver Dam Wash Elevation 2,178ft Lowest Point in Utah
NEVADA
UTAH
ARIZONA
Beaver Dam Wash
To Beaver Dam
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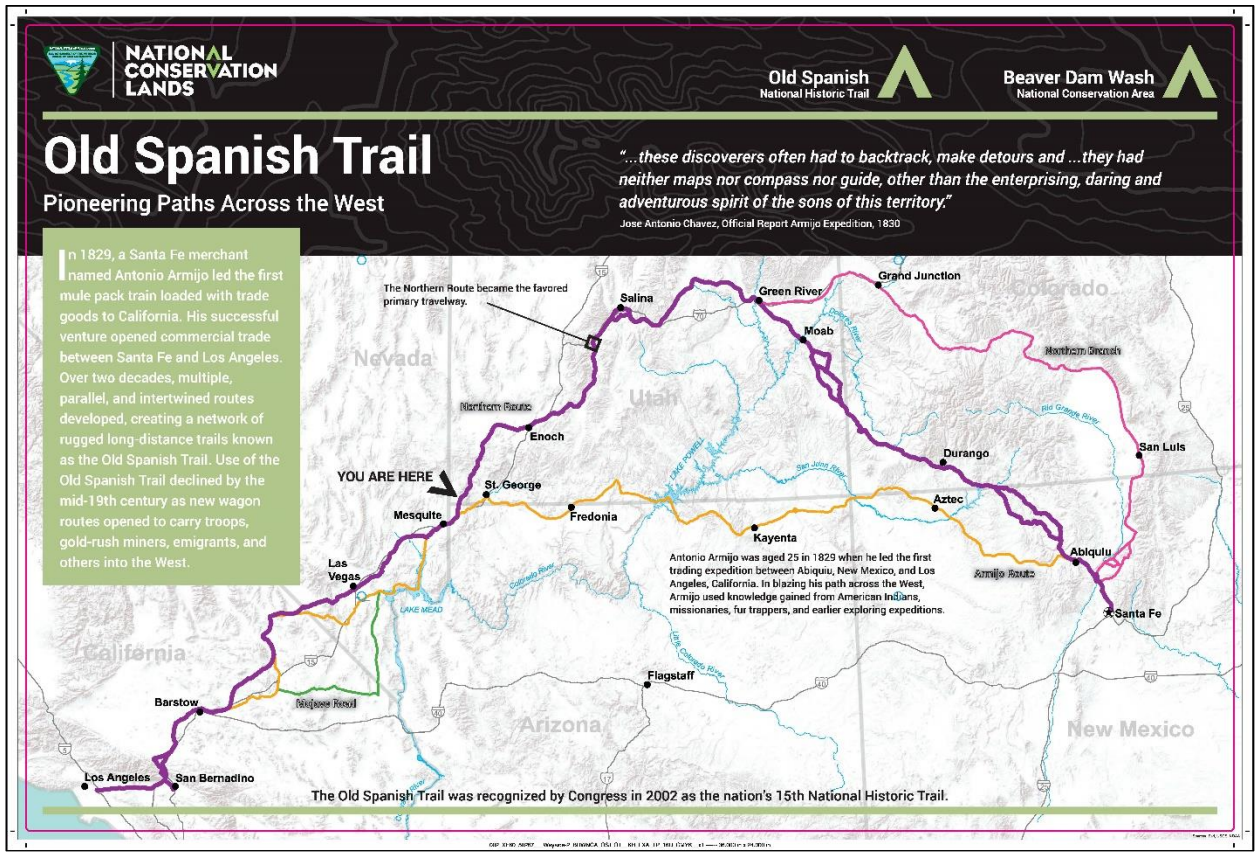
Accomplishments

In FY21, with new interpretive kiosks, the BLM Saint George Field Office enhanced the quality of visitor experiences for both the Beaver Dam Wash National Conservation Area (NCA) objects and values and the Old Spanish National Historic Trail (OSNHT). A kiosk with interpretive panels describing the life cycle and pollinators of the Joshua tree was installed along a backcountry route that passes through a "forest" of these iconic Mojave Desert yuccas. BLM also placed a new wayside and two displays for the OSNHT along Old Highway 91, which overlies the historic OSNHT route and is the only paved road through the NCA. NCA staff and interns also conducted studies and supported partner research that will assist us in the conservation and protection of NCA objects and values. They collected Mojave desert tortoise scat for use in DNA studies being conducted by Southern Utah University to evaluate tortoise dietary preferences in burned and unburned habitats and provided geo-spatial data to ecologists from the U.S. Geological Survey working to increase the availability of native plant materials for Mojave Desert revegetation projects.



Challenges

The Beaver Dam Wash NCA is challenged by the need to protect and restore critical habitats for at-risk wildlife species, including the threatened Mojave desert tortoise, in the face of climate change, prolonged droughts, higher temperatures, and catastrophic wildfires. The NCA is primarily within the Mojave Desert ecoregion where wildfires were formerly a rare occurrence, as some desert shrubs, like creosote bush, are naturally fire-resistant and widely spaced apart, which impede fire spread. Invasive annual brome grasses today fill in the gaps between individual plants, creating a highly flammable fine fuel source that has increased the size, intensity, and fire frequency. The Joshua tree community has been so reduced by wildfires across its range in the Mojave Desert that it is being evaluated for listing under the Endangered Species Act. BLM continues to conduct research with multiple partners to evaluate the most successful and cost-effective ways to rehabilitate fire-damaged desert vegetation communities in the NCA.

Figure 1: Joshua trees in bloom (left) and wildfire-destroyed Joshua trees (right).

Visitors

In FY21, the Beaver Dam Wash NCA visitation increased to an estimated 65,000 visits, more than double the level of visitation reported for FY20. The Covid-19 pandemic restrictions increased public participation in outdoor recreation, and the warm, arid climate of the NCA allows for enjoyable outdoor activities during all but the hottest summer months. The NCA is a popular destination for camping, hiking, upland big game and game bird hunting, nature photography, mountain biking, and UTV/4x4 riding on a network of designated vehicle routes. Tent and RV campers can use the 38 designated dispersed campsites with fire-rings, all located along maintained backcountry routes. The NCA also provides opportunities for world class rock climbing at Welcome Springs, Bulldog Knolls, and Woodbury Crags. Over 70 climbs, ranging in difficulty from 5.7 to 5.14, are easily accessible via short hikes from the Mojave Desert Joshua Tree Road Scenic Backway in the NCA. Many of the 40 Special Recreation Permit (SRP) holders who operate in the NCA offer commercial guiding services for rock climbing, mountain biking, and hunting for desert bighorn sheep and mule deer.

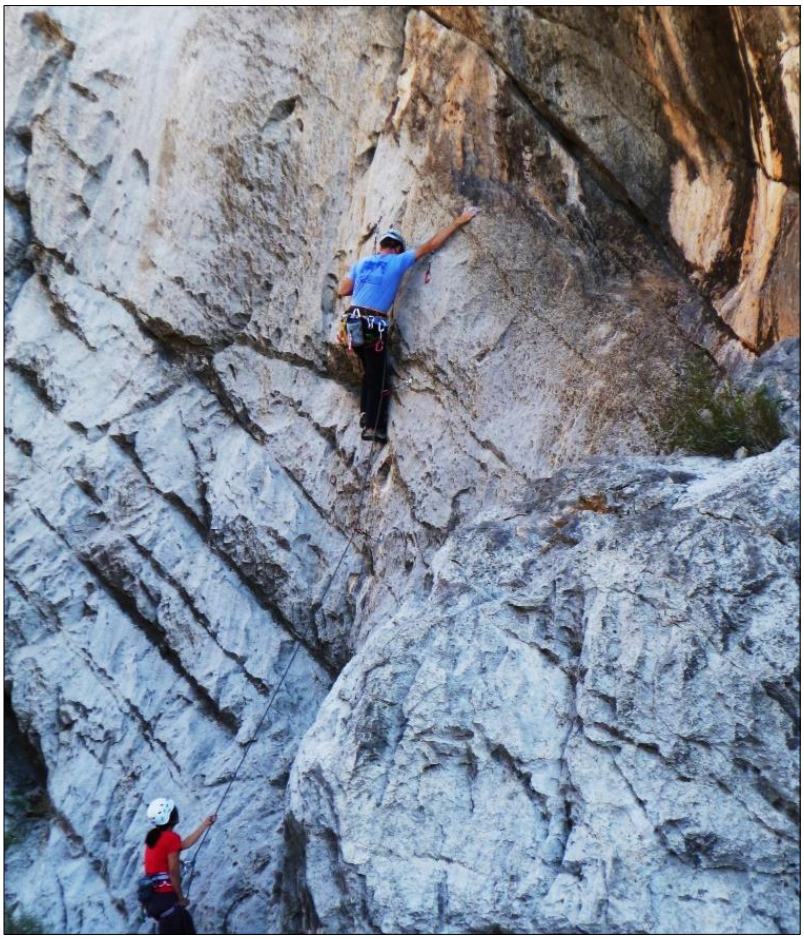


Figure 2: Rock climbers in Beaver Dam Wash NCA.

Partnerships

In FY21, BLM worked closely with volunteers from the Old Spanish Trail Association to install a new wayside for the OSNHT, along Old Highway 91 at Castle Cliff. We also set up two permanent displays, consisting of 8 -10 life-sized, self-rusting steel silhouettes that depict New Mexican traders and pack mules, loaded with woven goods, traveling the OSNHT between 1828 and 1847. Passing motorists on Old Highway 91 see these displays and can pull off at the waysides to where interpretive panels describe the history of the OSNHT and show a map of routes. The silhouettes and undeveloped landscape of the NCA allow visitors to have a vicarious experience of a 19th century pack mule train crossing the arid landscape of the Mojave Desert on the OSNHT.

Figure 3: Old Spanish National Historic Trail exhibit near on Hwy 91 near Castle Cliff, Beaver Dam Wash NCA.

Science

During FY21, the Beaver Dam Wash NCA Biologist, assisted by American Conservation Experience (ACE) Biological Resource Associates, continued a long-term monitoring program for Mojave desert tortoise, various bat species, and other BLM sensitive species, by conducting field surveys and using acoustical monitoring devices to detect and identify bat calls. The ACE Resource Associates also completed final survivorship counts for the 4,563 nursery-grown Mojave Desert native plants that were out-planted in fire-damaged desert tortoise critical habitat in the Woodbury Desert Study Area in 2016, as part of the NCA habitat rehabilitation research program. These plants endured persistent drought and high temperature conditions while receiving no supplemental water. The total survivorship of the plants was 19.7% (see figure below), which satisfied the research goals of this project to study small fertile islands of robust mature plants that survive long enough to produce seed. At the same time, these maturing plants provide important food and shelter resources for desert tortoise and other native wildlife species in fire-damaged areas of the NCA.

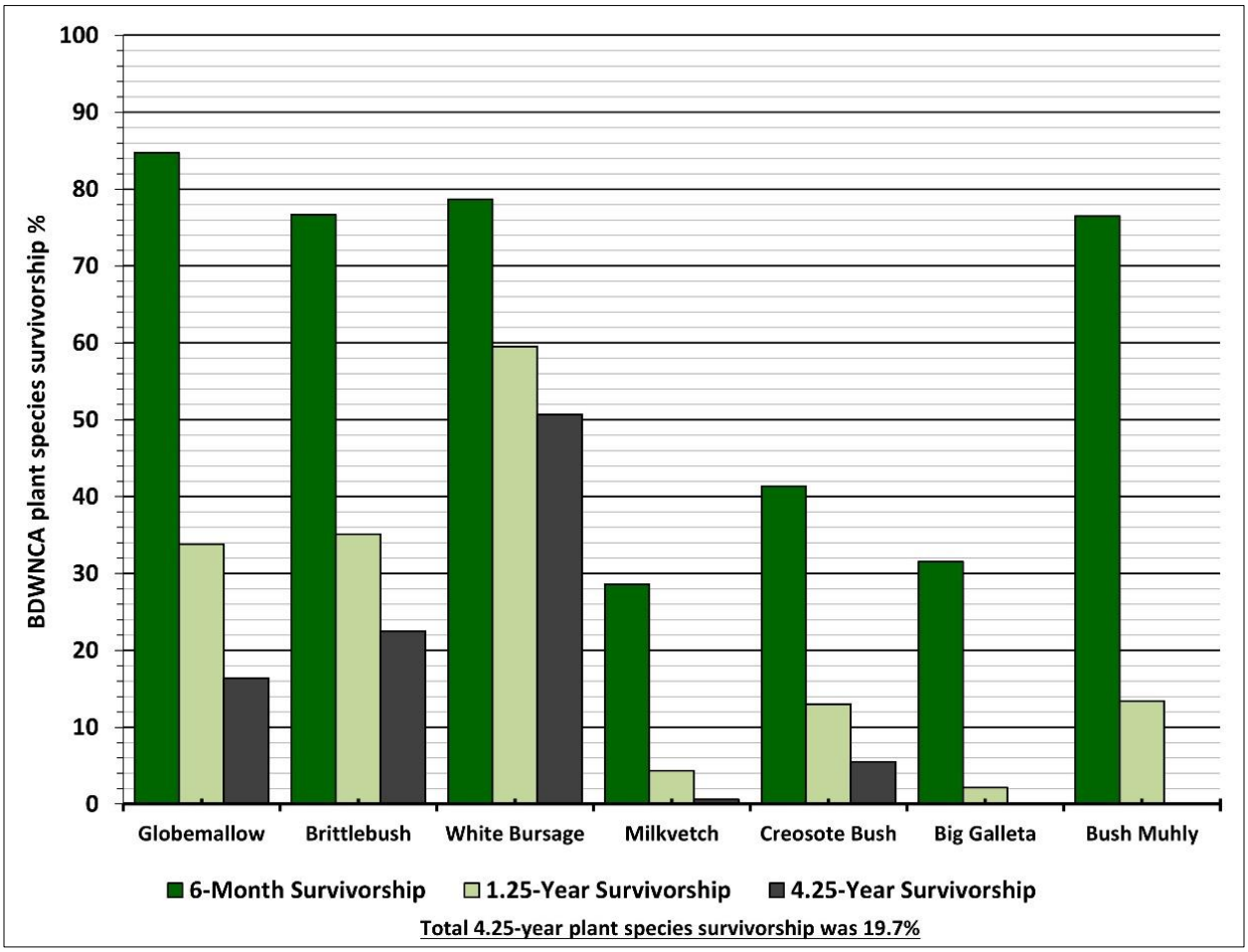


Figure 4: Beaver Dam Wash NCA plant species survivorship rates.

Climate Impacts

The native vegetation communities of the Beaver Dam Wash NCA are being impacted by climate change effects, including persistent and extreme drought conditions, elevated annual temperatures, erratic precipitation events, and more frequent wildfires. 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 5: Joshua trees inundated by invasvie brome grasses, Beaver Dam Wash NCA.

Climate Resiliency

Long-term climate monitoring and trend data are collected by a solar powered HOBO weather station and precipitation measurement gauges set up at various locations in the Beaver Dam Wash NCA. Since 2016, NCA staff have implemented large and small-scale habitat rehabilitation research projects, out-planting mature, nursery grown native species to create “fertile islands” in fire-damaged areas and monitoring plant survivorship. Through this research, we hope to determine the most effective species and methods to use to rehabilitate fire damaged vegetation communities and create more climate resilient landscapes.

Figure 6: Healthy native ecosystem within Beaver Dam Wash NCA.

Social and Environmental Justice

ACE work crews assisted Beaver Dam Wash NCA staff with habitat rehabilitation projects in fire-damaged Mojave desert tortoise critical habitat. ACE Emerging Professionals in Conservation (EPIC) Resource Associates completed internships with the NCA Biologist, gaining field and office experiences in wildlife and threatened and endangered species population monitoring. Both ACE programs provide young professionals with 'on the ground/in the field' experiences to support their development as future conservation leaders and federal agency employees. Exceptionally qualified, 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, and fostering a sense of public land stewardship in the next generation.

Figure 7: American Conservation Experience (ACE) youth workers hand-planting new vegetation after a wildfire.

Events

In FY21, the Covid 19 pandemic forced the cancellation of several SRP-authorized competitive events that are typically held on designated routes in the Beaver Dam Wash NCA. The grueling 84-mile long “Gravel Grinder” mountain bike race was the exception and was held in March of 2021, despite winter weather conditions. Fifty-one racers entered the race but only 27 finished the course due to driving snow and muddy course conditions on designated routes within the NCA (see photo below). BLM and permittee staff monitored the race at all times to ensure public health and safety standards were maintained.

Figure 8: Gravel grinder race, Beaver Dam Wash NCA, 2021.

Beaver Dam Wash

National Conservation Area

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