



**NATIONAL
CONSERVATION
LANDS**

Idaho
2021 Annual Manager's Report

Morley Nelson Snake River Birds of Prey National Conservation Area



Map

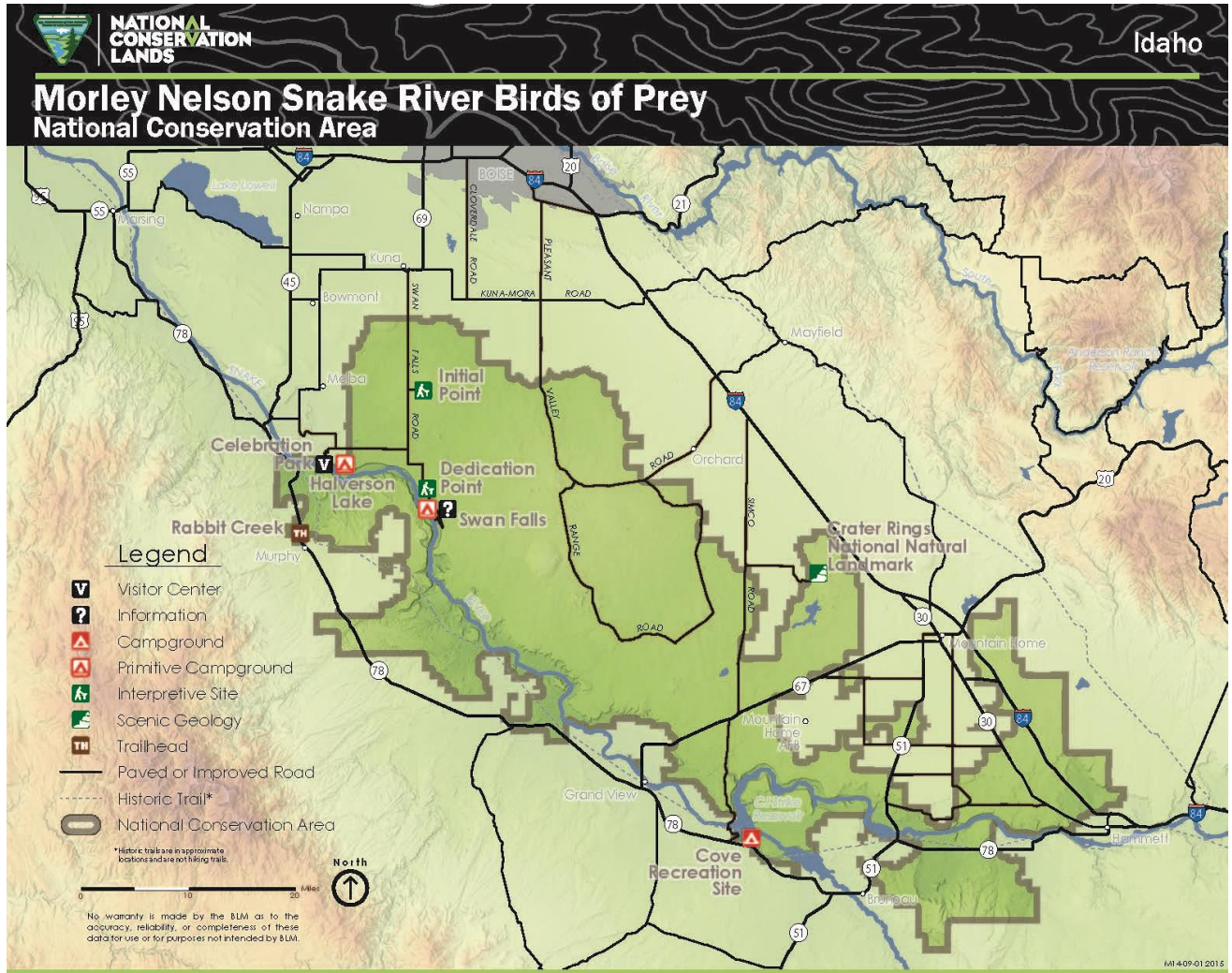


Photo Caption: map of the Morley Nelson Snake River Birds of Prey National Conservation Area.

Accomplishments

The Morley Nelson Snake River Birds of Prey National Conservation Area (NCA) staff oversaw one of the largest native shrub plantings ever conducted in the NCA. The staff collected locally adapted Wyoming big sagebrush seed and the seedlings were grown out by the US Forest Service Lucky Peak nursery. The seedlings were then planted in a wildland fire area that was selected for restoration to increase habitat connectivity for raptor prey. A total of 40,000 sagebrush seedlings were planted over a two-day period.

An NCA canyon-wide prairie falcon survey was conducted in collaboration with the Idaho Army National Guard to assess breeding occupancy and reproductive productivity for first time since 2002. . The large nesting population in the Snake River Canyon is one of the main reasons the NCA was established. Results provide data on the current population status of prairie falcons in the NCA which can be used by the BLM, other agencies, and the public.



Photo Caption: contracted workers plant sagebrush in the NCA in October 2021.

Challenges

The NCA is adjacent to the City of Boise and the greater Treasure Valley, which is one of the fastest growing metropolitan areas in the Western US. This growth has placed greater recreational demands on Idaho's public lands, including BLM managed lands. In particular, the growth in recreational shooting has led to an increase in irresponsible shooting practices including dumping and shooting of trash and wildlife poaching. The NCA continues to work with a coalition of stakeholders to address the illegal shooting of protected migratory birds and raptors in the NCA and other areas of Southwest Idaho. In FY21, the NCA was awarded funding through the NLCS Management Support Studies Program to better understand the scope and magnitude of the issue.

One of the key challenges NCA staff are faced with is understanding how anthropogenic pressures, climate change, wildfire and habitat degradation may interact and impact resource conditions and raptor populations. The NCA staff continue to work with partners to highlight these issues and identify potential management solutions.



Photo Caption: a long-billed curlew that was found shot on the NCA.

Visitors

An estimated 155,000 people visited the NCA in 2021 to enjoy the many recreational opportunities, such as camping, boating, fishing, hunting, shooting, hiking, biking, and horseback riding. A significant number of people regularly visited the Cove Recreation site and Dedication Point Overlook, both of which are included in a driving tour along the Western Heritage Byway. The Cove Recreation Site is a managed fee campground within the NCA. It received 6,500 visitors in FY 2021. The primary activities associated with this site are camping, fishing, boating, relaxation, and wildlife viewing. A camp host is on site providing information and light maintenance.



Photo caption: Cove Recreation Site within the NCA.

The Dedication Point overlook provides a great spot to view the area's famous birds of prey. From the canyon rim overlook, birdwatchers observe seasonal raptors, canyon and rock wrens, Say's phoebe, cliff swallows, white-throated swifts, common ravens, and rock doves. Sage, Lark, Brewer's sparrows, and western meadowlarks can also be seen in the shrubs along the trail that leads to the overlook. Collaboration with Boise District Engineering, Weeds, and Force Account staff successfully ensured that all recreation sites and facilities were maintained in good operational condition.



Photo Caption: wildlife biologist Joe Weldon leads a golden eagle ecology field trip to local birders at Dedication Point in June 2021.

Partnerships

The NCA continues to maintain and build upon its work with the Birds of Prey NCA Partnership group, and in FY21 collaborated in podcast interviews, outreach, research, and native planting efforts. The NCA's ongoing partnership with Idaho Fish and Game supports seed collection and native planting efforts. In addition, the NCA implemented a new applied restoration project with the US Geological Survey and Idaho Army National Guard to test novel seeding application rates in an effort to improve rehabilitation efforts on previously impacted areas within the Orchard Combat Training Center.



Photo caption: Idaho Army National Guard training in the Orchard Combat Training Center located within the NCA.

Science

The NCA wildlife and ecology programs continue to support scientific research to further understand the NCA ecosystems and address ongoing and emerging conservation threats. Current priority wildlife studies are focused on golden eagle nesting habitat suitability and nestling survival, understanding the scope of migratory bird illegal shooting mortality, prairie falcon Snake River Canyon occupancy and productivity, ferruginous hawk telemetry and blood contaminants, and burrowing owl occupancy distribution and productivity. These projects are being conducted and supported by many partners, including the Boise State University Raptor Research Center, Idaho State University, USGS Snake River Field Station, Idaho Army National Guard, Birds of Prey NCA Partnership, and the Intermountain Bird Observatory. One notable research project focuses on soil amendment strategies to increase post-fire sagebrush seedling establishment and survival. The NCA ecology program collaborated with the DeGraff lab at Boise State University to test how the addition of native soil and biochar amendments impact sagebrush seedling growth. Preliminary results suggest that growing sagebrush in native soil (which contains native microbial and fungal communities) increased root colonization with beneficial fungi. A field-based follow-up is planned for FY 22-24.



Photo caption: Group of Ferruginous Hawk fledglings.

Climate Impacts

The NCA is situated in one of the warmest and driest regions of Idaho, characterized by high variability in climate. The anticipated impacts of climate change for the NCA include milder winters, shifts in the timing and amount of precipitation, prolonged droughts, and increased wildfire. These impacts have profound implications for plant community dynamics, prey availability, wildfire risk, and restoration success. Prolonged drought conditions and conversion of shrub and grassland habitats to invasive annual communities, dominated by tumble mustard and Russian thistle, will continue to negatively impact small mammal communities, specifically Piute ground squirrels.

A primary challenge for restoration efforts in the NCA is the high interannual variability in the timing of precipitation and the greater incidence of warmer and dryer winters. Prolonged drought conditions the year following seedings and plantings reduce germination and limit establishment and first year survival of seedlings. In addition, milder winters and loss of persistent snow is especially problematic for sagebrush seedlings, as winter snow insulates seedlings from freeze thaw cycles and the absence of which has been linked to first-year mortality. The NCA staff have observed the detrimental effects of low precipitation and prolonged drought on restoration treatment success.



Photo caption: a Wyoming big sagebrush seedling

Climate Resiliency

The NCA continues to partner with researchers to develop and field-test strategies to overcome climatic and resource-related barriers to seeded and planted species establishment and survival. These include the use of novel seed coat technologies and soil amendments including biochar and mycorrhizae. These strategies may help provide a more favorable growth environment for developing seedlings, which can enhance establishment and survival.

A collaborative project between Idaho State University, Boise State University Raptor Research Center, Idaho Army National Guard, and BLM has produced a new habitat suitability model for golden eagles. The suitability model was generated using unmanned aircraft systems (UAS, i.e., drones) data and is based on terrain ruggedness, solar radiation, slope, and distance from crater floor. The model correctly predicted historical eagle nest sites in the Crater Rings nesting territory. Climate warming may influence nest site suitability over time given the importance of solar radiation in predicting nest sites. These results provide important information about the status of golden eagles on BLM-managed lands in the NCA and in southern Idaho and contribute to the long-term monitoring and management of eagles.



Photo caption: Wildlife Biologist doing Golden Eagle counts along the Snake River Canyon.

Social and Environmental Justice

The NCA education program continued to adapt to the changing school and community environments during the COVID-19 pandemic in order to provide quality programs. To continue to bring live raptor ambassadors to students, the NCA developed an interactive Virtual Field Trip for students learning from home and at schools. The NCA also worked with a local partner, Celebration Park, to create and deliver Virtual Winter Desert Ecology field trips.



Photo caption: Environmental Education Specialist talks to students about the NCA. Below Outdoor Recreation Planner talking to students about a Swainson's Hawk.



Since Field Trips were not permitted for schools this year, the NCA staff modified the annual Desert Discovery Days field trip program and brought it to the local schools as an on-site field day. Education stations were set up in the schoolyards for students to rotate through and learn about public lands, the ecosystem, and raptors in the the NCA. The program included a visit from the live raptor ambassadors.

Events

The NCA staff participated in the 4th annual Raptor Fest event on August 28th. Raptor Fest is an annual family-friendly event hosted by the NCA's friends' group, the Birds of Prey NCA Partnership, that celebrates raptors and other wildlife, cultural resources, and the people and organizations that work in the NCA and Treasure Valley of Southwest Idaho. As part of this event, the NCA staff participates in public fields trips to the NCA and hosts a booth where the public can learn about the NCA, engage with staff, and meet our education raptor ambassadors.



Photo Caption: NCA staff talking to members of the public at Raptor Fest in August 2021.



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