



**NATIONAL
CONSERVATION
LANDS**

Basin and Range

National Monument

Nevada

Annual Manager's Report—Fiscal Year 2020



U.S. Department of the Interior
Bureau of Land Management

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U.S. Department of the Interior
Bureau of Land Management

Basin and Range

National Monument

Designating Authority

Designating Authority: Presidential Proclamation, Number 9297, Establishment of the Basin and Range National Monument

Date of Designation: July 10, 2015

Additional Designations

The Worthington Mountains Wilderness, designated in 2004, is within the boundary of Basin and Range National Monument. The Mount Irish and Shooting Gallery Areas of Critical Environmental Concern were designated for cultural resources in 2008 by the Ely District Record of Decision and Approved Resource Management Plan. The White River Narrows Archaeological District is also within the monument. Lands managed by the Humboldt-Toiyabe National Forest border the monument to the west. Key Pittman and Wayne E. Kirch Wildlife Management Areas, both managed by the State of Nevada Department of Wildlife, are in close proximity to the east.

Site Description

The Basin and Range National Monument is a vast and rugged landscape that redefines our notions of distance and space and where opportunities for solitude abound. About two hours north of Las Vegas, the 704,000-acre monument includes Garden and Coal valleys, the Worthington and Seaman Mountains, the Golden Gate and Mount Irish ranges, Hiko and White River narrows, and Shooting Gallery rock art site. The first national monument managed by BLM in Nevada, it provides for all types of outdoor recreation, including climbing, hiking, bicycling, camping, hunting, OHV riding, and more. The monument contains an array of natural resource objects, serving as a transition between the Mojave Desert and the sagebrush steppe ecosystems of the Great Basin with a large, ecologically intact landscape, providing connectivity and migration corridors for a variety of animal species, including Greater Sage-grouse, large mammals, reptiles, bats, and birds. Several endemic and locally-rare plant species occur within the monument.

Monument Offerings

Basin and Range National Monument contains three public rock art sites: White River Narrows, Mount Irish, and Shooting Gallery, with interpretive pamphlets produced by Nevada Rock Art Foundation. Lincoln County Archaeological Initiative projects, with a focus on research and interpretive education of cultural resources, are completed and ongoing in the monument. The monument is open to hunting and it is a popular area for

pronghorn antelope, mule deer, and upland game bird hunters. Recreation opportunities include the Pahrnagat Special Recreation Management Area and the Alamo Motorcycle Special Recreation Permit Area. Although there are no designated developed or primitive camping areas, the entire monument is open to camping, with no fees. Livestock grazing is a monument value, with 31 allotments partially or wholly within the monument, including both sheep and cattle grazing.

Year Accomplishments

Outcome Based Grazing, Lincoln County Archaeological Initiative projects, and an Environmental Assessment for the Mt. Irish area have been three main areas of focus and accomplishments in FY20. Land Health Evaluations and Ecological Soil Descriptions were ongoing for the grazing project, a 3D model was added to the monument web page for virtual tours of cultural resources, and a Decision Record was signed for the Mt. Irish project.

Future Priorities and Opportunities

An Architecture and Engineering design for the Mt. Irish project is being pursued in 2021 as well as additional signage at points of interest. Future priorities are to complete the botanical inventory; continue to work with the Friends Group; complete the Environmental Assessment for Outcome Based Grazing; and additional Lincoln County Archaeological Initiative projects will be awarded in 2021.

Basin and Range

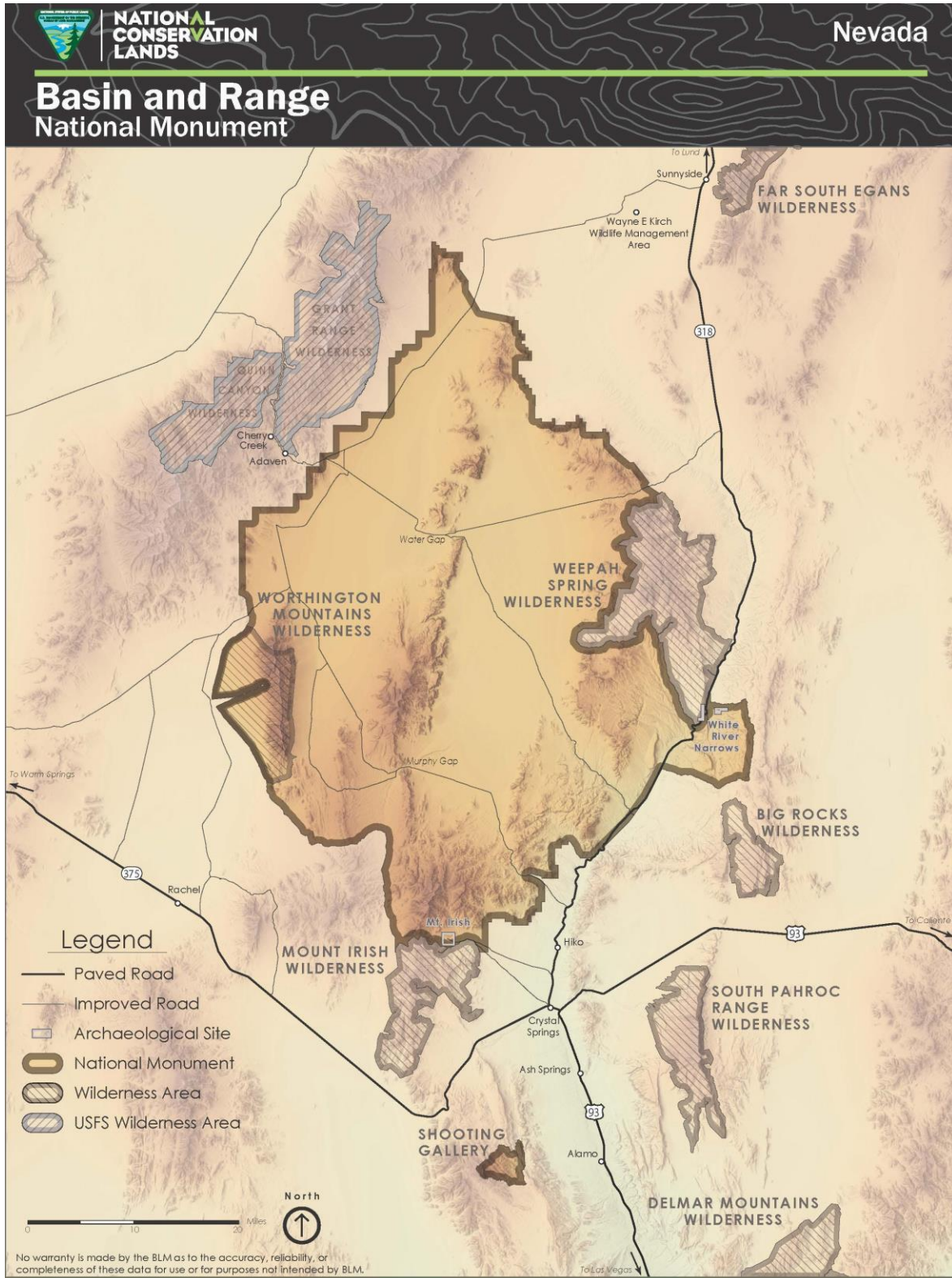
National Monument

BLM Caliente Field Office
1400 South Front Street, PO Box 237
Caliente, NV 89008
Phone: 775-726-8100

Unit Manager: Alicia Styles

Site Web Address: <https://www.blm.gov/programs/national-conservation-lands/nevada/basin-and-range-national-monument>

Map of Basin and Range National Monument



1 Basin and Range Overview

Acreage

Total Acres in Unit	703,585
BLM Acres	703,585
Other Federal Acres	0
State Acres*	0
Private Acres*	4,438

*State and Private Acres are not part of the total unit acres

Budget

Budget Title	Code	Funding
Monuments & Conservation Areas	1711	\$572,948
Rangeland Management (Outcome Based Grazing, BARNM portion)	1020	\$53,338
Cultural Resources	1050	\$11,000
Total Budget		\$637,286

Primary funding for the monument is provided by allocation from 1711 (National Monuments and Conservation Areas) and additional benefits stem from functional areas, such as Rangeland Management and Cultural Resources.



Mt. Irish
Petroglyph Site
in the
Archaeological
District

Current Areas of Focus

The Decision Record and Finding of No Significant Impact were signed in July 2020 for the Environmental Assessment (EA) for Mount Irish Cultural Resource Protection and Visitor Improvements project in Basin and Range National Monument. The project is to construct four primitive campsites with picnic tables and fire rings and install a vault toilet to improve the public's recreational experience and minimize impacts to natural and cultural resources. Visitation to Mt. Irish has increased from approximately 100 people in 2006 to nearly 900 people in 2018.

In March 2020, the Basin and Range National Monument bolstered their website with virtual tours of some popular attractions, such as Mt. Irish, Crescent City, and Shooting Gallery. This was made possible from funding through the Lincoln County Archaeological Initiative. The public can now enjoy virtual tours of spectacular rock art from the comfort of home at <http://lcai10.legiongis.com/index.htm>

The University of Nevada Reno (UNR) and Natural Resource Conservation Service (NRCS) reached out in February 2020 for assistance with completion of Ecological Site Descriptions for outcome based grazing allotments within the Basin and Range National Monument. Monument staff compiled data, maps, contact information for permittees, and applied their knowledge of the rangelands of the area for the cooperators. The interaction and collaborative effort between the researchers and BLM will benefit public lands and rangeland management into the future. These efforts have been applauded by both the researchers and livestock grazing permittees.

The Seaman and White River Herd Area gather was implemented in FY20. Several Lincoln County Archaeological Initiative (LCAI) projects were an area of focus this past year. For a complete listing of the LCAI projects, see the Science section below. A wildlife habitat modeling project is ongoing. Recreation visitor use data were collected, and additional miles of roads were inventoried. Inventories, monitoring, cooperation with partners, recreation, public access, outreach, and research were all areas of focus in 2020.

Planning and NEPA

The BLM paused work on the Basin and Range National Monument Resource Management Plan and associated Environmental Impact Statement due to a shift in workload priorities within the Department of Interior. The BLM continues to manage public lands within the monument in accordance with the 2015 Presidential Proclamation and Ely Resource Management Plan signed in 2008, as amended by the Greater Sage-Grouse Approved Resource Management Plan Amendment signed in 2015. Resource inventories in the monument are in progress.

Planning related to the outcome based grazing project has been a focus in FY20. An interdisciplinary team worked on the project and associated Environmental Assessment as well as the Land Health Evaluations for the 13 allotments. Cultural inventories for the proposed range improvements portion of the project are ongoing.

Fieldwork Authorizations were signed for cultural resource projects and surveys in the monument. A Seeds of Success collection authorization was signed in 2020 as well.

The Decision Record and Finding of No Significant Impact were signed for the Seaman and White River Herd Area Wild Horse Gather Environmental Assessment (DOI-BLM-NV-L000-2017-0006-EA) in May 2018. The Proposed Action is to gather 100 percent of horses and manage the area for zero horses within and around the Herd Areas over the next 10 years. Current population estimates for the area exceed 365 wild horses. The Herd Areas overlap 190,848 acres of the monument. This horse gather began in November 2019 but was suspended due to unseasonably warm and dry conditions. The gather resumed in 2020 and concluded on January 12, 2020 with 420 excess horses gathered from the Seaman and White River Herd Areas.



Helicopter pilot herds wild horses toward the trap in the Seaman and White River Herd Area gather

Staffing

A Monument Manager was permanently staffed in FY20. The Monument Manager (GS-12, 0340 Series) reports to the District Manager and spent most of her time working on the National Monument this year. The Monument Manager served a two-month temporary promotion as Associate District Manager for the Ely District in October and November 2019.

A Rangeland Management Specialist (GS-11, 0454 Series) spends 100% of his time working for the National Monument. An Archaeologist (GS-11, 0193 Series) works 50% of his time for the National Monument and spends 50% of his time as Project Manager for a Special Legislation Archaeological Initiative. An Outdoor Recreation Planner (GS-11, 0023 Series) spends 50% of his time working for the National Monument and 50% of his time working for the Caliente Field Office. The Rangeland Management and Archaeologist positions were permanently staffed for the entirety of FY20. The Outdoor Recreation Planner position was staffed for the first quarter of FY20 and remained

vacant for the remainder of the year. Seasonal fire staff supported the monument during their off-season, assisting with monitoring, data collection, and installation of signage. District staff that are not solely assigned to the monument organizational unit support the monument throughout the year.

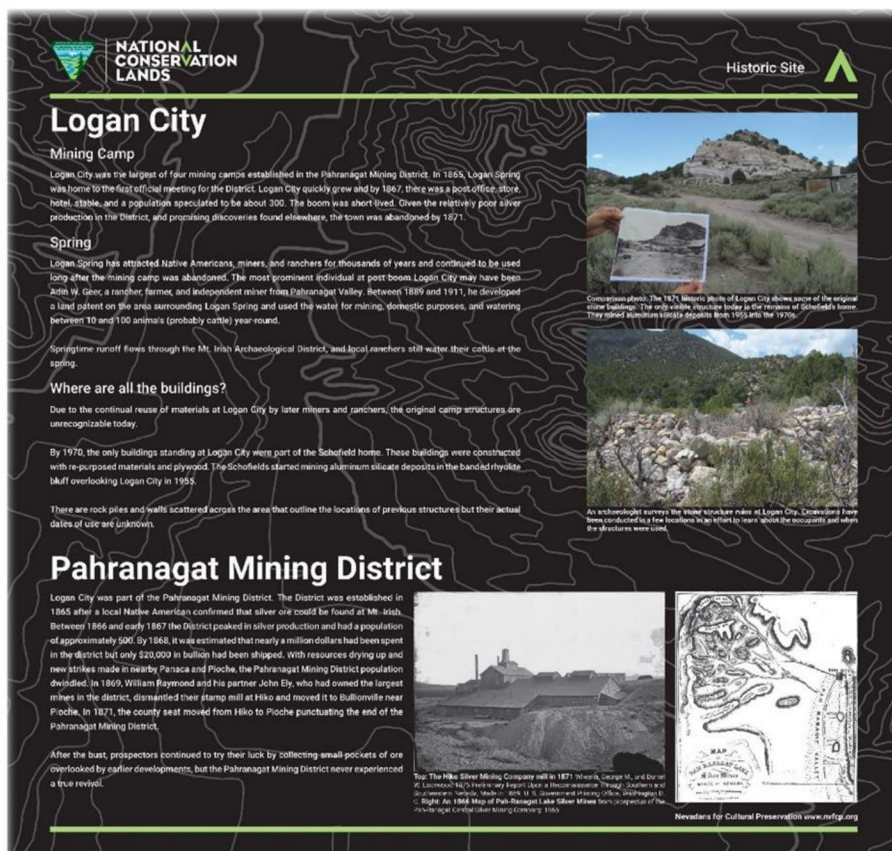


Rangeland
Management
Specialist
working with
collaborators
in the
monument

2 Programs and Accomplishments

General Accomplishments

Visitor services, such as the development of interpretive panels and kiosks and posting of a 3D model of popular rock art sites to the monument web page, were accomplished in 2020. An Environmental Assessment was completed for the Mt. Irish area. A variety of Lincoln County Archaeological Initiative Projects were ongoing this last year, with incredible rock art restoration completed by a world-renowned rock art conservator and recordation of artifacts over 8,000 years old from some of the earliest inhabitants of North America. Rangeland Ecological Site Descriptions and Land Health Evaluations were undertaken as part of the outcome-based grazing project Term Permit Renewal process.



Layout for interpretive kiosk to be installed at Logan City historic mining district in 2021

Inventories of resources, objects, and values were another area of focus at Basin and Range National Monument in FY20. Traffic counters and weather stations recorded data about visitor use patterns and weather within the monument. A wild horse gather was completed within the Seaman and White River Herd Area.

The following accomplishments fulfill elements of the BLM Nevada National Landscape Conservation System Strategy:

Theme 1: Ensuring the Conservation, Protection, and Restoration of NLCS Values.

Goal 1B. Expand understanding of the NLCS values through assessment, inventory, and monitoring.

1. Complete and maintain up to date inventories of resource values at NLCS units and incorporate into management and implementation plans. Assess the integrity of resource conditions and values. Use the described unit values to provide a clear focus for statewide priority assessments of proposed management and restoration projects.

Botanical inventories, including inventories for invasive plants and/or noxious weeds, were ongoing in FY20. This work was accomplished via an Assistance Agreement and with a volunteer. Precipitation monitoring stations monitor temperature, precipitation, wind speed, and wind direction in the monument in select locations. Wildlife habitat modeling was in progress for several wildlife species listed in the proclamation that established the area.

Collection and interpretation of visitor use data are being refined over time in the monument. Data were downloaded from traffic counters across the monument in 2020. The monument is located in a remote area far from population centers, has no facilities, and few access roads from main paved roads. The visitor use information provided below was derived from visitor registration sheets at the popular rock art and cultural sites (for 2016 and 2017) and from traffic counter data (for 2018 to 2020) within Basin and Range National Monument.

Visitation at Public Rock Art and Cultural Sites

Year	Mt. Irish and Logan City	Shooting Gallery	White River Narrows	Total Documented Visitation*
2016	715	51	178	944
2017	816	44	117	977
2018	1,456	97	256	1,809
2019	1,030	116	200	3,473
2020	1,231	102	323	7,534

*Includes Public Rock Art Sites, dispersed use, and traffic counter data.

The total annual visitation for FY20, including dispersed use, is estimated at 7,534 (BLM Recreation Management System 2020).



Visitor register box at the Shooting Gallery Area of Critical Environmental Concern

Theme 2: Collaboratively Managing the NLCS as Part of the Larger Landscape

Goal 2D: Adopt a community-based approach to recreation and visitor services delivery, consistent with the conservation purpose of the NLCS and the socio-economic goals of the local community.

3. More actively promote use of collaborative/cooperative law enforcement agreements with other federal, state and local agencies to bring in trained auxiliary rangers to provide visitor safety, protect resources, deter criminal activities, and investigate and prosecute crime.



Removal of graffiti is accomplished by BLM and volunteers

In March 2020, a federal grand jury indicted two men for allegedly conspiring to vandalize U.S. government property, including an archaeological site in Basin and Range National Monument. The case involves charges under the Archaeological Resources Protection Act (ARPA) for vandalism within the White River Narrows Archaeological District. “This case reinforces the importance of law enforcement working together to maintain Nevada’s landscape, natural resources, and cultural artifacts for everyone to enjoy,” said U.S. Attorney Nicholas A. Trutanich for the District of Nevada. The case is a product of a collaborative investigation led by the BLM.

General Accomplishments Table

	Number of Visitors	Education Participants	Interpretive Participants	Visitor Center/Contact Station Visits	Hours of Volunteers	Hours of Hosted Workers (NCC Crew)	Visitors to Public Cultural Sites
TOTALS	7,534	virtual	virtual	N/A	797	N/A	1,656

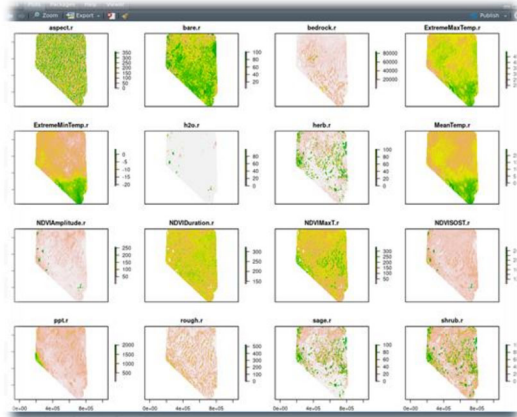
Education, Outreach, and Interpretation

The BLM and collaborators worked on four interpretive signs and two educational kiosks in 2020. These interpretive products were fabricated in 2020 and will be installed in winter 2021. Education and interpretive programs were held virtually in FY20, due to the COVID-19 pandemic. For example, a 3D model was added to the monument web page, which allowed visitors to visit and learn about cultural resources and popular rock art sites virtually.

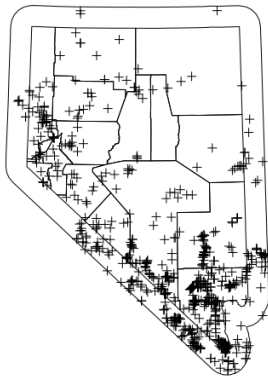
Fish and Wildlife

At the end of 2018, BLM and the U.S. Geological Survey (USGS) entered into an agreement to model and inventory wildlife habitat in Basin and Range National Monument and other surrounding areas in the Ely District. This inventory information will prove useful in the future. Wildlife species identified in the designating proclamation for the monument were prioritized as high for this habitat modeling effort which was ongoing in FY20.

Collaborators working on the project include USGS, University of Nevada, Reno, and Nevada Department of Wildlife. Data collection, quality control, and compilation for the reptiles and amphibians portion of the project is nearly complete for the area. Preliminary models have been created for a few species and these models are currently being refined.



Environmental variables are added to species point location data during an initial modelling step



Grazing

The BLM selected 11 demonstration projects for an outcome-based grazing authorizations initiative, which is designed to provide BLM managers and grazing permit holders greater flexibility in the management of permitted livestock. One of the permittees selected for this initiative is John Uhalde and Company within the Basin and Range National Monument. The Uhalde family believes that forage sustainability and good livestock practices intertwine to create an economically viable option for the next generation and provide food and fiber for our nation. Analyses, Land Health Evaluations, Habitat Framework Analyses for Greater Sage-grouse habitat, and Ecological Site Description work for this project was a major focus of the monument in 2020.

The flexibility allowed under the outcome-based grazing authorizations will demonstrate management practices that BLM managers and livestock operators can use to respond to changing, on-the-ground conditions such as wildfires, high moisture years, or drought. This will better ensure healthy rangelands, high-quality wildlife habitat, and economically sustainable ranching operations.



John and Gracian
Uhalde from John
Uhalde & Co.

The demonstration projects will provide BLM, working in partnership with ranchers and other partners, with an opportunity to enhance its guidance and best management practices to use when issuing grazing permits. The projects will also be used as models for developing cooperative monitoring plans and land health evaluations that will be implemented in future authorizations under this program.

In collaboration with other BLM offices across Nevada and a cooperator, Eastern Nevada Landscape Coalition, the Habitat Assessment Framework (HAF) for Greater Sage-grouse Habitat process was ongoing for six allotments within Basin and Range National Monument.

Additional range work completed in 2020 included monitoring of 15 allotments, 19 compliance inspections, 23 grazing bills produced, 1 mile of riparian inventory, 2 acres of wetland inventories, monitoring in support of rangeland health evaluations, utilization monitoring, and maintenance and inspection of rangeland improvement projects.

Locatable and Mineral Materials

Three existing mineral material pits were inspected in FY20. There was no locatable mineral activity this year.



Freiburg mineral
material pit
used for
roadway
maintenance

Oil and Gas

Although oil and gas parcels were leased prior to the monument designation in 2015, some leases and APDs expired in 2020. No new activity was undertaken in 2020 related to oil and gas.

Partnerships

Partnerships in 2020 included Friends of Basin and Range, USGS, Great Basin Institute, Eastern Nevada Landscape Coalition, University of Nevada Reno, NRCS, collaboration with John Uhalde and Company for the Outcome Based Grazing project, and several partnerships for Lincoln County Archaeological Initiative projects.

Recreation and Visitor Services

Recreation data from traffic counters were downloaded every six months in FY20. Due to the vacant Outdoor Recreation Planner position, this work was accomplished with assistance from fire staff as well as other monument personnel. In addition, visitor use data and feedback were collected from trail registers at popular public sites. Brochures and maps of the monument and surrounding areas were made available to the public at newly installed kiosks throughout the monument. Camping, hiking, OHV riding, hunting, and rock climbing continue to be recreational areas of interest.

Dispersed use numbers increased in 2020, likely due to the COVID-19 pandemic and the proximity of the area to Las Vegas and other metropolitan centers. Despite the BLM office closure due to COVID, several visitors called and emailed monument management and staff to receive information. Dissemination of information (maps, brochures, camping locations, driving directions, etc.) was an increased workload in 2020.



recreation and camping opportunities abound in Basin and Range National Monument

Photo by Bill Sullivan

Volunteers

Volunteers accomplished a variety of incredible tasks and monitoring activities in the past year. The total hours volunteered were 797 hours and the value of this work totaled \$21,678.40. The monument could not accomplish nearly as many tasks and projects without its tireless volunteers.

Monitoring of cultural sites was accomplished by BLM Archaeologists and an active volunteer group of site stewards in Basin and Range National Monument. Site stewards monitor cultural areas, such as rock art sites, and document any changes to the sites (i.e. vandalism and other resource issues). Volunteers also spent time removing graffiti and assisting with a Lincoln County Archaeological Initiative cultural project from the monument this past year.

The Friends of Basin and Range actively volunteered across different resource programs in FY20. Hours were spent monitoring, removing abandoned mine markers, and on clean up projects across the monument.

Basin and Range National Monument Volunteers	VOLUNTEER HOURS	Value of Work
Lincoln County Cultural Site Stewards	9	\$244.80
Graffiti Removal	11	\$299.20
Cultural Project volunteer hours	552	\$15,014.40
Friends of Basin and Range hours	225	\$6,120.00
Total Hours and Value of Work (based on 2020 of \$27.20/hour as calculated by Independent Sector)	797	\$21,678.40

Wild Horses and Burros

The Decision Record and Finding of No Significant Impact were signed for the Seaman and White River Herd Area Wild Horse Gather Environmental Assessment (DOI-BLM-

NV-L000-2017-0006-EA) in May 2018. The Proposed Action is to gather 100 percent of horses and manage the area for zero horses within and around the Herd Areas over the next 10 years. The area is in excess of approximately 365 wild horses. The Herd Areas overlap 190,848 acres of the monument. This horse gather began in November 2019 but was suspended due to unseasonably warm and dry conditions. The gather resumed in 2020 and concluded on January 12, 2020 with 420 excess horses gathered from the Seaman and White River Herd Areas.

The purpose of the gather was to prevent undue or unnecessary degradation of the public lands associated with excess wild horses and to restore a thriving natural ecological balance and multiple-use relationship on public lands, consistent with the provisions of Section 1333(b) of the 1971 Wild Free-Roaming Horses and Burros Act. Removing excess animals will also enable significant progress toward achieving the Standards for Rangeland Health as identified by the Mojave-Southern Great Basin Resource Advisory Council.



Wild horses removed during a gather are provided hay and water during temporary holding before being transported to BLM facilities

Public Access

Lincoln and Nye Counties maintain the majority of access roads in the monument. BLM and Lincoln County have a Road Maintenance Agreement and met quarterly in 2020 to coordinate road maintenance priorities, as outlined in the agreement.

3 Science

Science

Special legislation in Nevada created a funding mechanism for the Lincoln County Archaeological Initiative (LCAI). The Lincoln County Archaeological Initiative funds projects for the inventory, evaluation, protection, and management of unique archeological resources in Lincoln County. The following table lists of funded projects that address either specific sites located in the monument or resources known to occur in the monument.

Lincoln County Archaeological Initiative Projects in the Monument

Project Number	Project Name	Project Description	Contractor Name	Project Start Date	Project End Date
9-B048	Portable X-ray Fluorescence Analysis of Rock Art Pigments	High-tech analysis of pictographs in Lincoln County	Logan Simpson Design	11/1/2016	12/31/2020
9-B053	A Historic Context for Mining in Lincoln County, Nevada	Studies of Mining in Lincoln County	Summit	11/1/2016	5/8/2022
10-B056	Ethnohistoric Context for Nineteenth-Century Native American Settlement and Land-Use Patterns	Research on Native American occupation and what sites still exist in Lincoln County	G2 Archaeology	4/19/2018	10/31/20
10-B057	3D Documentation Pilot Study: Crescent City Structures and Rock Art at MT Irish and Shooting Gallery	Documenting rock art sites and historic structures for a 3D web-based model	Architectural Resources Group	4/20/2018	10/31/21
11-B061	Lincoln County High	Inventory of prehistoric archaeology sites above 8,000 feet	Desert Research Institute	8/1/2019	8/10/2022

Project Number	Project Name	Project Description	Contractor Name	Project Start Date	Project End Date
11-B062	Graffiti Mitigation and Rock Art Recording	Graffiti removal and camouflage at 45 rock art panels in the White River Narrows and Mt. Irish Archaeological Districts	Stratum Unlimited	7/3/2019	2/28/2021
11-B063	Testing the Pinyon Premise	Analysis of starch grain residues on bedrock milling slicks and ground stone tools in the Mt. Irish and Shooting Gallery ACECs	G2 Archaeology	7/3/2019	4/30/21
11-B064	Archaeological and Geomorphological Contexts of Rockshelters, Caves, and Overhangs in Lincoln County, NV	Develop an archaeological and geomorphological context of rockshelters, caves, and overhangs	Desert Research Institute	8/14/2019	8/14/2022
11-B065	Archaeology and Geomorphology Green Box	Develop and implement an educational Green Box for Lincoln County schools. The Green Box will cover the scientific application of geology and the importance of water in the discovery and preservation of archaeological sites.	Desert Research Institute	8/9/2019	8/8/2022

Project Number	Project Name	Project Description	Contractor Name	Project Start Date	Project End Date
11-B066	Unmanned Aerial Vehicle UAV Sensor Testing for Archaeological Site and Feature Identification in Lincoln County, NV	Use a variety of UAVs over previously identified archaeological sites to test the usefulness for feature identification and mapping, delineation of areas with potential depth, analysis of spatial characteristics, and site monitoring indicators	Desert Research Institute	8/9/2019	8/8/2022
12-B067	Known Unknowns: Fine-Grained Volcanic (FGV) Toolstone Sources of Lincoln County	Identify geologic sources of toolstone-quality FGV in the monument and geochemically characterize these source material types using X-ray fluorescence (XRF) spectrometry	Desert Research Institute	9/23/20	9/23/2023
12-B068	Developing luminescence dating methods to better understand people through time and place in Lincoln County, Nevada	Develop new methods in luminescence dating that are specifically calibrated to Lincoln County, Nevada's geology and archaeology. Optically Stimulated Luminescence (OSL) dating determines when a mineral (i.e., sand grain) was last exposed to sunlight	Desert Research Institute	9/25/20	10/31/2023

Other science-based research ongoing in FY20 included botanical inventory, wildlife habitat modeling, and collections for Seeds of Success. The Science Plan has not been completed for this monument.



Before and after photos from removal of carved-in graffiti

4 Resources, Objects, Values and Stressors

Resources, objects, and values in Basin and Range National Monument include natural resources (flora and fauna), rangeland resources and livestock grazing, cultural resources, and geologic resources. Inventory and monitoring data are listed below as well as potential stressors to the resources, objects, and values within the monument.

Natural Resources

The natural resources within the monument span the spectrum from low elevation mixed desert scrublands through sagebrush communities to montane pine forests. The diversity of plant communities lends itself to a diversity of wildlife species. The following lists (from the Proclamation) further illustrate the diversity of flora and fauna in BARNM.

Natural Resources Objects and Values

Flora:

Big sagebrush	Needle and thread	Curl-leaf mountain
Black sagebrush	White river catseye	mahogany
Little sagebrush	Cholla	Quaking aspen
Yellow rabbitbrush	Spinystar	Idaho fescue
Saltbush	Englemann's hedgehog	Blue bunch wheatgrass
Mormon tea	Cactus	Ponderosa pine
Indian rice grass	Mojave kingcup cactus	Limber pine
Sandberg bluegrass	Utah juniper	Bristlecone pine
Needlegrass		Singleleaf pinyon

Fauna:

Desert bighorn sheep	Common zebra-tailed	Western terrestrial garter
Mule deer	lizard	snake
Rocky Mountain elk	Long-nosed leopard lizard	Great Basin spadefoot
Pronghorn	Northern sagebrush lizard	toad
Mountain lion	Common side-blotched	Western toad
Bobcat	lizard	Baja California treefrog
Kit fox	Desert horned lizard	Chukar
Cottontail rabbit	Great Basin skink	Gambel's quail
Pygmy rabbit	Great Basin whiptail	Sage thrasher
Black-tailed jackrabbit	Gila monster	Brewer's sparrow
Pale kangaroo mouse	Desert nightsnake	Western burrowing owl
Dark kangaroo mouse	Great Basin rattlesnake	Pinyon jay
Greater short-horned	Long-nosed snake	Clark's nutcracker
lizard	Sonoran mountain	Mountain bluebird
Desert spiny lizard	kingsnake	Loggerhead shrike
Yellow-backed spiny lizard	Striped whipsnake	Green-tailed towhee
Great Basin collared lizard	Ringneck snake	Golden eagles
Great Basin fence lizard	Gopher snake	Cooper's hawk
		Ferruginous hawk



Mule deer
in Basin and
Range National
Monument

Botanical Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried	Specimens Inventoried	Acres Monitored in FY20
703,585	50 acres botanical inventory accomplished with volunteer in FY20; 9,940 acres inventoried for invasive plants and/or noxious weeds	N/A	1 acre of vegetation treatment monitored; botanical monitoring plan Assistance Agreement entered into at the end of FY20

A total of 9,940 acres were inventoried for invasive plants and/or noxious weeds. Botanical inventory of the monument was ongoing in FY20 on a limited basis with a volunteer. A new Assistance Agreement with cooperator Eastern Nevada Landscape Coalition was entered into at the end of FY20. The Assistance Agreement will complete the botanical inventory and begin creation of a monitoring plan for the future.

In 2020, Assessment, Inventory, and Monitoring (AIM) points were not monitored due to crew fieldwork timing in relation to the COVID-19 pandemic. AIM point monitoring is slated to resume in FY21.

For the first few years since the monument was designated, a floristic inventory has been the focus of natural resources inventory efforts. In 2018, the BLM entered into an agreement with the U.S. Geological Survey (USGS) to begin a large-scale wildlife habitat modeling effort in the monument and surrounding areas in the Ely District. Initial modeling results have been produced for some species. The results from this project will give more information about wildlife resources and habitat suitability within the monument in coming years.

Stressors Affecting Natural Resources

Stressors have not been formally identified for all monument objects. It is anticipated

that these will be identified through the RMP process and/or the Science Plan. Invasive species are one of the potential stressors for natural resources. In several of the fire scars, in Irish Mountain and the Seaman Range, invasive non-native species, such as cheatgrass (*Bromus tectorum*) have become well established, and will continue to pose issues in the future if fires are not successfully rehabilitated. Drought conditions can cause stress to both botanical and wildlife resources.

Rangeland Resources and Livestock Grazing

The Proclamation for BARNM lists ranching as one of the cultural traditions in the area, “The land tells the story of a rich cultural tradition. From the earliest human inhabitants 13,000 years ago, to miners and ranchers in the past century and a half, to a modern artist in recent decades, the area's residents have created and maintain notable legacies.” Later on, the Proclamation elaborates on this history, “During the late 19th century, Basque and other ranchers brought sheep and cattle ranching into Garden Valley, and ranching remains to this day.”

The Proclamation states, “Nothing in this proclamation shall be deemed to affect authorizations for livestock grazing, or administration thereof, on Federal lands within the Monument. Livestock grazing within the Monument shall continue to be governed by laws and regulations other than this proclamation.”

Allotments in the monument are managed in accordance with the Mojave-Southern Great Basin Resource Advisory Council Standards and Guidelines for Grazing Administration on BLM Lands. The Mojave-Southern Great Basin Resource Advisory Council (RAC) intends that the Standards and Guidelines will result in a balance of sustainable development and multiple use along with progress, over time, toward attaining desired rangeland conditions.

There are 31 allotments wholly or partially contained within BARNM. These allotments include approximately 32,119 permitted Animal Unit Months (AUMs). The boundary of the Monument does not coincide with allotment boundaries. Therefore, the number of AUMs was calculated using percentages of allotments within the BARNM boundary and is not precise because distribution of livestock is not uniform in allotments. A small portion of one allotment (Cottonwood/Quinn Canyon allotment) within the Monument is administered by the Humboldt-Toiyabe National Forest-Ely Ranger District because the majority of the allotment is located on lands administered by the U.S. Forest Service.

Authorized grazing use includes both cattle and sheep. There are currently 19 permittees authorized to graze only cattle. There is one permittee authorized to graze only sheep. There are three permittees authorized to graze both cattle and sheep. Authorized grazing use is in accordance with established use periods or seasons of use for the allotment.



Rangeland plant community in the monument

Grazing periods of use within the BARNM vary and include both seasonal and yearlong. Seasons include fall/winter/spring period and spring/summer/fall period. Grazing systems may include rest-rotation, deferred rotation, and deferred rest-rotation. Allotments that are grazed seasonally may include grazing in other allotments outside the BARNM. Grazing operation systems also include base property and/or water rights to which grazing preference is attached.

Livestock are moved between pastures, allotments, base property, or other areas based on the season of use or period of use developed for the grazing system. The majority of sheep operators include grazing use on several allotments outside the BARNM. Livestock distribution is controlled by various methods including water locations, herding and fencing.

Inventory and monitoring of allotments, livestock grazing compliance, billings, transfers, and associated administration of livestock grazing permits are performed by the Monument Rangeland Management Specialist. Precipitation monitoring stations monitor temperature, precipitation, wind speed, and wind direction in the monument in select locations. An annual coordination meeting is typically hosted every year in the fall for the livestock grazing permittees in the Monument. This meeting was held in the field with individual permittees and over the phone in FY20 due to the COVID-19 pandemic.

Rangeland Resources and Livestock Grazing Status and Trend Table

Status of Resource, Object, or Value	Trend
Rangeland Health Assessments of allotments and evaluations in relation to the Resource Advisory Council Standards and Guidelines are on-going.	Trends are assessed through the Rangeland Standards Determinations Documents



University of Nevada Reno, NRCS, and BLM collaborated on rangeland Ecological Site Descriptions in the monument in 2020

Rangeland Resources and Livestock Grazing Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY20
703,585 acres	Updates to GIS layers and range databases are ongoing, based on a previous year's inventory of range improvement projects.	703,585 acres	Allotment monitoring (ML Program Element) The following 15 allotments were monitored in FY20: Batterman Wash, Pine Creek, Murphy Gap, West Timber Mountain, Worthington Mountain, South Coal Valley, Black Bluff, White River Trail, Black Horse, White River, Crescent N-4, Crescent N-5, Dry Farm, Coal Valley Lake, and Irish Mountain for a total of 666,544 acres monitored.

Stressors Affecting Rangeland Resources and Livestock Grazing

Stressors have not been formally identified for all monument objects. It is anticipated that these will be identified through the RMP process and/or the Science Plan. Drought, invasive species, lack of rangeland improvements in some areas, and wildland fire are potential stressors to rangeland resources and livestock grazing in the monument. Visitors and increased vehicle traffic have the potential to act as stressors. Vehicles impact cattleguards and roads in silty soils lacking gravel and/or hard surfaces pose maintenance challenges. Lack of even distribution of water throughout the allotments is a stressor to livestock grazing operations in the monument.

Cultural Resources

Archaeological sites and historic landscapes give us important insights into the ways human activities and the environment have been linked together through time and how seemingly minor cultural practices can contribute to substantial environmental change. Discovering, studying, and understanding the evidence of past human influences on the land gives the BLM and the public critical background as we consider how to use and manage the same land today.

Cultural resources are found throughout the monument. A total of 95 cultural resource inventories have been completed in the Basin and Range National Monument between 1975 and 2020. Cultural Resource Inventories have been completed for 38,710 acres within the monument. During these inventories, 2,486 cultural resources were documented within BARNM. These documented resources include:

Isolated Artifacts

1,168 isolated finds

Cultural Resource Sites

1,108 sites of the prehistoric period

75 sites with artifacts present from both the prehistoric and ethnohistoric time periods

16 sites of the ethnohistoric period

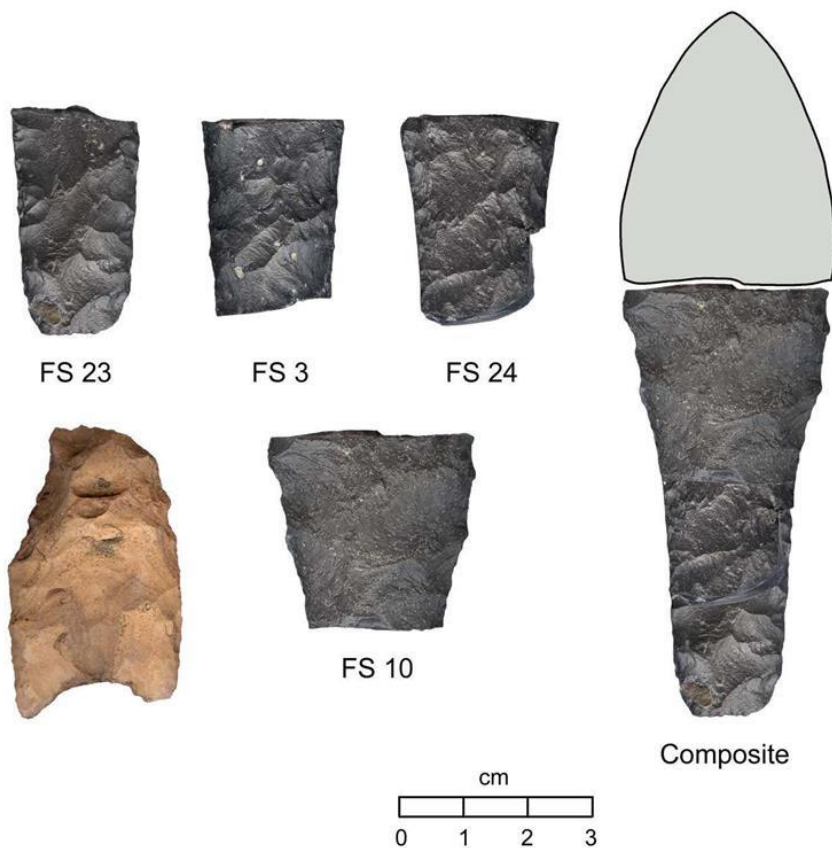
7 sites with artifacts present from both the prehistoric and historic time periods

112 sites of the historic period

Of the 2,486 resources documented, there is a single property listed on the National Register of Historic Places (NRHP), which is the White River Narrows Archaeological District. There are 820 properties eligible for the NRHP. There are 1635 properties that are not eligible for the NRHP. The remaining 31 properties have not been evaluated for their eligibility to the NRHP.

The project *Late Pleistocene to Middle Holocene Landscape Use in Coal Valley, Basin and Range National Monument, Lincoln County, Nevada* was finished this year. The

Desert Research Institute (DRI) investigated the earliest peoples in Coal Valley in relation to the landscape remnants left behind after pluvial Lake Coal receded in the terminal Pleistocene. The goals were to better understand the history of the lake and any associated wetlands and whether it influenced the distribution of terminal Pleistocene (Paleoindian) to Middle Holocene (Early Archaic) age cultural resources. To understand how this landscape has changed during the past ~25,000 years, they initiated a two-part investigation. The first focused on mapping, describing, and obtaining age control of landforms in the bottom and along the margins of Coal Valley. The second was a Class III archaeological survey of 2,162 acres of BLM-managed public lands on landforms of appropriate age and setting to expose old archaeological sites. In addition, short public outreach video clips of work as it was ongoing (“field blogs”) that show how archaeologists and geologists work to figure out what evidence on the ground means were produced. These videos will be hosted on the BLM and DRI websites for public viewing.

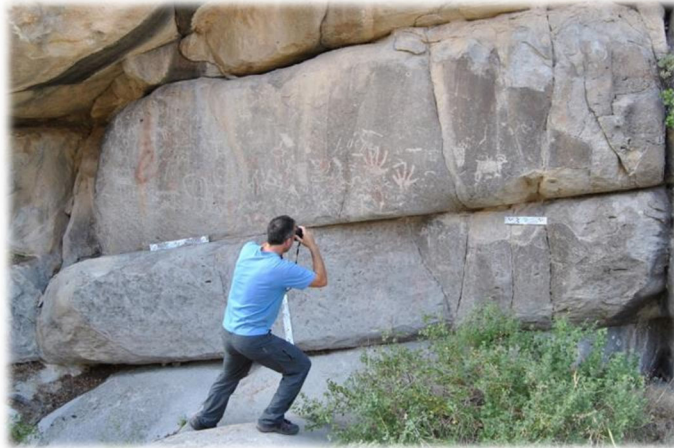


Artifacts found during the *Late Pleistocene to Middle Holocene Landscape Use in Coal Valley, Basin and Range National Monument, Lincoln County, Nevada* project. These artifacts are over 8,000 years old and are from the earliest inhabitants of North America.

Another project finished this year was *3D Documentation Pilot Study: Crescent City Structures and Rock Art at Mt. Irish and Shooting Gallery*. Architectural Resources Group conducted a pilot study in which portions of three archaeological sites were documented using state-of-the-art 3D documentation techniques. The results are available via an online database focusing on public interpretation. The sites in question are in the Mt. Irish, Shooting Gallery and Crescent City areas of the monument. The project’s goals were to

facilitate management and public interpretation of the three sites, and to explore the potential of 3D documentation for other sites in Lincoln County and the Great Basin as a whole.

This project used laser scanning and photogrammetry to document the three sites. The methods allow the three-dimensional capture of any subject matter, and the creation of a very accurate replica model of that subject, using a digital point cloud. The project website is linked to the Basin and Range National Monument webpage.



Photogrammetry documentation at a rock art site

Cultural Resources Status and Trend Table

Status of Resource, Object, or Value	Trend
Due to the size of the monument and density of cultural resources, approximately 5% of the area has been inventoried for cultural resources.	Stable trend for known resources.

Cultural Resources Inventory, Assessment, Monitoring Table

Acres in Unit	Total Acres Inventoried	Acres Possessing Object	Number of sites monitored in FY20
703,585 acres	38,710 acres	5,996 acres	30

Note: Cultural Resources monitoring is measured by sites monitored not by acres monitored.

Stressors Affecting Cultural Resources

Stressors have not been formally identified for monument objects. It is anticipated that these will be identified through the RMP process and/or the Science Plan. Potential stressors to cultural resources include erosion and other natural processes as well as human impacts, such as looting, vandalism, and recreational over-use of sensitive

areas.

Geologic Resources

The geology of the BARNM provides for dramatic scenery and spectacular underground recreational opportunities. The following list includes geologic resources identified in the Proclamation.

Geologic Objects and Values:

Natural arches	Golden Gate Range
Sheer cliffs	Garden Valley
Alamo bolide impact evidence	Coal Valley
Limestone ridges	Mt. Irish Range
Three caves	Mount Irish
Stalactites	Worthington Mountains
Stalagmites	Leviathan Cave
Flow stones	Soda straws
Rim pools	Cave shield

Geologic Resources Status and Trend Table

Status of Resource, Object, or Value	Trend
Individual known features have been inventoried and monitored and are in good status.	Stable trend for existing known resources.

Geologic Resources Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY20
703,585 acres	Not applicable	703,585 acres	Monitoring is ongoing at several known features (i.e. mountain ranges, natural arch, caves, etc.).

Stressors Affecting Geologic Resources

Stressors have not been formally identified for all monument objects. It is anticipated that these will be identified through the RMP process and/or the Science Plan. Potential stressors to geologic resources could include but are not limited to natural events, such as erosion, freezing and thawing, and human-related impacts, like research, rock climbing, and recreation users.

5 Summary of Performance Measure

An overview of the previously described resources, objects, and values inventoried and monitored in FY20 is provided in the table below.

Resources, Objects, and Values Status Summary Table		
Resource, Object, or Value	Status	Trend
Natural Resources	9,990 acres botanical resources inventoried in FY20.	N/A
Rangeland Resources and Livestock Grazing	666,544 acres monitored in allotments in FY20.	N/A
Cultural Resources	30 sites monitored and 90 acres inventoried in FY20.	Stable for known resources
Geologic Resources	Monitoring is ongoing.	Stable



Rock formation containing the natural arch, a geologic feature

6 Manager's Letter

I signed the Decision Record and Finding of No Significant Impact in July 2020 for the Environmental Assessment (EA) for the Mt. Irish Cultural Resource Protection and Visitor Improvements project. The project is to construct four primitive campsites with picnic tables and fire rings and install a vault toilet to improve the public's recreational experience and minimize impacts to natural and cultural resources. Visitation in the Mt. Irish area along with other areas in the monument has recently increased, and we are looking forward to engineering and design and implementation of the project in the future. The COVID-19 pandemic brought more visitors, both in-person and virtually, to the monument in 2020.

A 3D model of some popular public cultural sites was added to our web page in March 2020. This project and other Lincoln County Archaeological Initiative projects continue to build our knowledge of cultural resources in the area and expand horizons in science. These projects are collaborative, made possible through grants, agreements, and contracts, as well as supported by volunteers, who donated hundreds of hours of their time this year.

The national Outcome Based Grazing demo project with livestock operator John Uhalde and Company continues as a major area of focus for my staff and I. The University of Nevada, Reno, NRCS, and BLM worked collaboratively on Ecological Site Descriptions, and land health is being evaluated for this project. Common allotment discussions are working towards resolution of challenges that have been lingering for decades on these allotments. Operational reports have been a tremendous asset this year. More consistent, open dialogue has been a very positive result of this project between BLM and the Uhaldes.

Despite a global pandemic, increased visitation, and changes to the way we do business, monument staff accomplished incredible tasks in 2020. These accomplishments would not have been possible without the assistance and collaboration of partnerships with stakeholders. We are looking forward to 2021 and the exciting opportunities it brings to Basin and Range National Monument.

Sincerely,

Alicia Styles
Monument Manager



**NATIONAL
CONSERVATION
LANDS**

Basin and Range

National Monument

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January 14, 2021

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