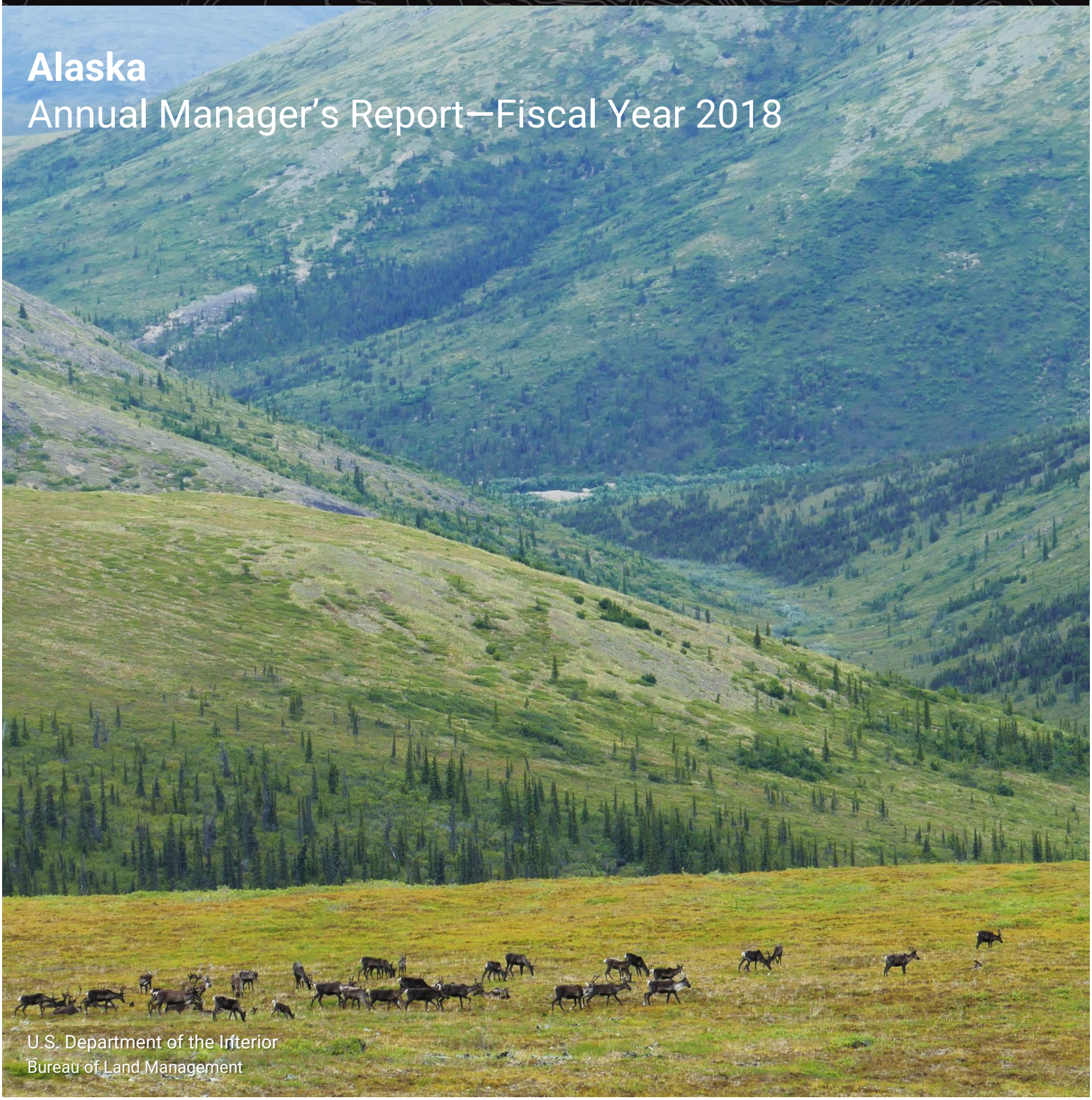
NATIONAL CONSERVATION LANDS

Steese

National Conservation Area

Alaska

Annual Manager's Report—Fiscal Year 2018



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

Table of Contents

Steese

National Conservation Area

Designating Authority

Designating Authority: Alaska National Interest Lands Conservation Act (ANILCA) P.L. 96-487
Date of Designation: December 2, 1980

In the 1980 ANILCA, 1,208,624 acres were designated as the Steese National Conservation Area (SNCA). Congress directed the BLM to consider the special values of caribou range and Birch Creek in the management of the SNCA.

In ANILCA Title VIII Section 802, Congress declared that fish and wildlife on federal lands in Alaska be managed for subsistence uses. Federal land managers in Alaska manage subsistence harvest of fish and wildlife on unencumbered federal lands.

The SNCA is divided into two units (the North Unit and the South Unit) separated by State of Alaska lands and the Steese Highway (AK-6).

Additional Designations

The south unit of the SNCA contains Birch Creek Wild and Scenic River (WSR), of which 77 of the total 126 river miles flows through it. The river is designated as a Wild river, signifying the river is free-flowing and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and unpolluted; a vestige of primitive America.

The north unit of the SNCA contains the Pinnell Mountain National Recreation Trail (PMNRT). This 27.3 mile long trail offers a challenging, isolated experience while providing expansive views of the White Mountains, Crazy Mountains, and Yukon River Valley.

Site Description

A half day's drive from Fairbanks, Alaska, the SNCA offers stunning scenery, peaceful solitude, and outstanding opportunities for year-round recreation. The SNCA was designated by the ANILCA in 1980 to protect the area's special values, particularly Birch Creek WSR, and caribou habitat.

The SNCA plays a major role in the annual life of cycle of the Fortymile and White Mountains caribou herds, offering migration corridors, crucial summer calving grounds in high alpine tundra, and winter ranges among black spruce boreal forests. A few areas provide year-round habitat for Dall sheep, an uncommon species in Interior Alaska. In addition, the SNCA provides habitat for a variety of BLM Alaska Sensitive Species,

including breeding habitat for olive-sided flycatcher and rusty blackbird, and likely numerous sensitive bumblebee species.

Summer visitors to the SNCA backpack, hike, camp, fish, pick berries, and hunt under Alaska's 'midnight sun.' Located in two units straddling the remote Steese Highway, the SNCA offers primitive, remote recreation opportunities with few encounters with others. Wildlife viewing opportunities abound – raptors, upland birds, moose, fox, caribou, and bears are just a few of the mammals that may be spotted while recreating along Birch Creek WSR, the PMNRT, or one of the many travel routes that access the SNCA.

In addition to the magical winter scenery and norther lights, winter visitors enjoy snowmobile adventures, dog mushing, and skiing. Wildlife viewing, hunting and trapping are common winter activities throughout the SNCA. Every year in February, the SNCA bustles with activity from the Yukon Quest, a 1,000 mile international sled dog race that runs through the SNCA on its way from Fairbanks, AK to Whitehorse, YT. In recent years, tours guides have been offering sled dog tours on portions of the Yukon Quest trail within the SNCA.

Steese National Conservation Area Offerings

The SNCA provides ample opportunity for dispersed outdoor recreation. In the north unit, the Twelvemile Summit Wayside and Eagle Summit Wayside provide access to either end of the PMNRT. Traversing alpine ridges between the White Mountains and the Crazy Mountains, the PMNRT offers sweeping mountain vistas and brilliant wildflower displays under the unceasing light of the midnight sun. In the south unit, the Birch Creek Wayside offers a launching point for rafters to enjoy a 110 mile long float trip on this WSR, with myriad gravel bars offering ideal campsites along the way. The Fortymile Caribou Herd provides excellent opportunities for sport and subsistence hunting, wildlife viewing, and research.

Year Accomplishments

Over the past year, there was a 13% increase in recreational users documented in the SNCA over 2017 numbers, representing the highest level of use recorded. Outreach efforts included BLM participation in the Fairbanks Outdoor Show, three “Wild About Rivers” sessions held at the Fairbank’s Children’s Museum, and an artist-in-residence focused on Birch Creek WSR. In addition, new geo-referenced maps of federal subsistence hunt areas within the SNCA were made available to the public in 2018. ABR Inc. finalized their high-resolution lichen cover maps within the range of the Fortymile Caribou Herd which will greatly aid habitat suitability and selection studies within the SNCA. Continued monitoring of Birch Creek shows that water quality is improving over time.

Future Priorities and Opportunities

- Complete the Steese White Mountains Travel Management Plan.
- Develop the Steese White Mountains Business Plan.
- Artist-in-residence planned for summer 2019 to celebrate the 50th anniversary of the PMNRT.

Steese

National Conservation Area

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NATIONAL CONSERVATION LANDS
Alaska
Steese
National Conservation Area
STEESE NCA NORTH
STEESE NCA SOUTH
Circle
Lower Birch Creek
Central
Central Airstrip
Ptarmigan Creek
North Fork
Mount Prindle Research Natural Area
Twelvemile Summit
Upper Birch Creek
Eagle Summit
HIGHWAY
STEESE
YUKON
RIVER
Birch Creek Wild and Scenic River
To Fairbanks
Legend
Restroom
Interpretive Site
Trailhead
Trail Shelter
Trail
Road
National Conservation Area (NCA)
Research Natural Area
North
Miles
No warranty is made by the BLM as to the accuracy, reliability, or completeness of these data for use or for purposes not intended by BLM.

1 Steese Overview

Acreage

Total Acres in Unit	1,213,932
BLM Acres	1,198,113
Other Federal Acres	0
State Acres*	15,624
Private Acres*	195

Budget

Budget Title	Code	Funding
Monuments & Conservation Areas	1711	$368,257
Wildlife Management	1110	$103,614
Riparian Management	1040	$1,152
Wilderness Management	1210	$2,027
Recreation & Visitor Services	1220	$115,663
Soil, Water, and Air	1010	$23,048
Forestry	1030	$2,664
Cultural Resources	1050	$14,684
Fisheries Management	1120	$10,926
Cad Lands and Realty Management	1440	$832
Abandoned Mine Lands	1620	$3,081
Maintenance and Ops	1660	$6,724
Mining Law Admin	1990	$79,236
Total Budget		**$731,908**

Current Areas of Focus

Managing the Fortymile Caribou Herd (FMCH) at a sustainable level is a current issue and area of focus. As the herd grows and harvest quotas increase, motorized hunter activity in road-accessible areas increases. During short fall and winter season openings in 2018, 900 caribou were harvested in three days and 700 caribou harvested in 2 days in the Steese Highway area. Hunters using ATVs created new trails and caused resource damage in the SNCA. Travel management planning began in 2018 and will attempt to address this emerging issue.

In addition to management of subsistence caribou harvest, BLM and partners are continuing work to identify key Fortymile caribou habitats and forages.

This ATV trail shows impacts of trail proliferation in alpine tundra habitat. This trail at Eagle Summit was created in two seasons on state of Alaska lands, and is representative of current challenges associated with OHV use in the SNCA.

On August 24, 2018 pursuant to § 2409a(M) of Title 28 of the United States Code, the State of Alaska provided notice of its intent to file a quiet title action to the submerged

lands of Birch Creek WSR. The State of Alaska is making the case that title to these lands passed to Alaska at statehood based on the equal footing doctrine, the Submerged Lands Act, 43 U.S.C. §§ 1301 *et seq*., and the Alaska Statehood Act, 72 Stat. 339, 48 U.S.C. A similar case, previously filed by the State of Alaska for portions of the Fortymile WSR, also located in the BLM Eastern Interior Field Office is currently working its way through the judicial system with the Department of Justice. Findings from the Fortymile case will likely set precedence in the court system, and could have impacts to future management of rivers on Federally Administered Lands in Alaska.

In October of 2018, the Supreme Court of the United States ruled in Sturgeon v. Frost that Non-public lands within Alaska's national parks are exempt from the Park Service's ordinary regulatory authority. Navigable waters within Alaska's national parks – no less than other non-public lands – are exempt from the Park Service's normal regulatory control. We are currently awaiting guidance from the Department of Justice for the implications to management of rivers that flow through BLM administered lands.

Planning and NEPA

Status of the Resource Management Plan

- Record of Decision and Approved Resource Management Plan, December, 2016
- Transportation Management Plan
  *Logan Simpson is currently contracted to complete this plan on BLM's behalf. They are currently working on trail evaluation.

Status of Activity Plans

- Recreational Activity Management Plan, October 1993
- River Management Plan (Birch Creek National Wild River), December 1983

Status of the RMP Implementation Strategy

- An implementation strategy will be developed and initiated in FY 18.

2018 SNCA Permittees

NEPA Number	Project Name	Project Applicant	Project Description
DOI-BLM-AK-F020-2017-0007-EA	Rod's Alaskan Big Game & Wilderness Guide	Mr. Rodney Pangborn	Grant a special recreation permit for guided hunts of sheep, moose, caribou, wolf, and bear within the White Mountains NRA and SNCA.
DOI-BLM-AK-F020-2017-0017-DNA	Arctic River Guides	Mr. Garrett Jones	Grant a special recreation permit that includes guided float trips on Beaver Creek and Birch Creek.
DOI-BLM-AK-F020-2018-0021-EA	Squaw Creek ROW	Mr. James Baisdon	Grant a ROW along 0.5 miles of Squaw Creek in the SNCA to provide access to State mining claims. (Pending)
DOI-BLM-AK-F020-2018-0001-DNA	SkiLand Summit	Mr. Kerry Barnes	Issue a special recreation permit for guided snow machine and ATV tours in the White Mountains and SNCA.
DOI-BLM-AK-F020-2018-0006-DNA	Yukon Quest International	Yukon Quest Intl Ltd.	Renew a special recreation permit for a sled dog race that crosses through 34 miles of existing trail in the SNCA.
DOI-BLM-AK-F020-2018-0015-DNA	Arctic Expedition Service	Arctic Expedition Service	Renew a special recreation permit for AES to provide outfitting and pickup/ drop off services for independent rafters/canoers on Birch Creek and Beaver Creek.
DOI-BLM-AK-F020-2019-0009-DNA	Arctic Dog Adventure Co.	Lisbet Norris	Renew a special recreation permit for commercial winter dogsled tours and summer hiking tours in the White Mountains NRA and the SNCA.

Staffing

The SNCA is managed with an interdisciplinary team in the Eastern Interior Field Office (EIFO) as well as support staffing from the Fairbanks District Office (FDO). Staff positions and percentages of time dedicated to work in the SNCA are listed below:

Position	Series/Grade	% Time Dedicated	Home Office*
Field Manager	0340/13	10	FO
Law Enforcement	1801/11	20	FO
Assistant Field Manager/ Resources	0340/12	10	FO
Assistant Field Manager/ Visitor Services SNCA Manager	0340/12	20	FO
Archaeologist	193/12	20	FO
Fish Biologist	0482/11	10	FO
Hydrologist	1315/11	10	FO
Physical Scientist	1301/11	10	FO
Realty Specialist	1170/11	10	FO
Wildlife Biologist	0486/11	10	FO
Wildlife Biologist	0486/11	50	FO
Natural Resource Specialist	0401/9	40	FO
Outdoor Recreation Planner	0023/11	50	FO
Interpretive Park Ranger	0025/7	50	FO
Mining Engineer	0880/9	10	FO
Geologist	1350/7	20	FO
District Manager	0340/14	10	DO
Budget Analyst	0560/11	10	DO
National Conservation Lands State Office Lead	0301/13	10	SO

* FO: Field Office / DO: District Office / SO: State Office

2 Programs and Accomplishments

General Accomplishments

Work conducted in the SNCA has focused primarily on interdisciplinary work with multiple agency partners to meet the management considerations for caribou range, Birch Creek, and subsistence management. This work satisfies the National 15-Year Strategy Theme 1: Ensuring the Conservation, Protection, and Restoration of National Conservation Lands (formerly known as National Landscape Conservation System) Values.

General Accomplishments Table

	Number of Visitors	Education Participants	Interpretative Participants	Visitor Center/Contact Station Visits	Hours of Volunteers			
TOTALS	36,438	2,103	52	N/A	192			

Education, Outreach, and Interpretation

Outdoor Days





Once again, BLM staff participated in the interagency Outdoor Days for the Fairbanks North Star Borough School District. The three-day spring event offered 566 sixth-grade students a chance to engage with public land management agencies and learn about outdoor professions such as archaeology, fisheries, firefighting, and recreation management.

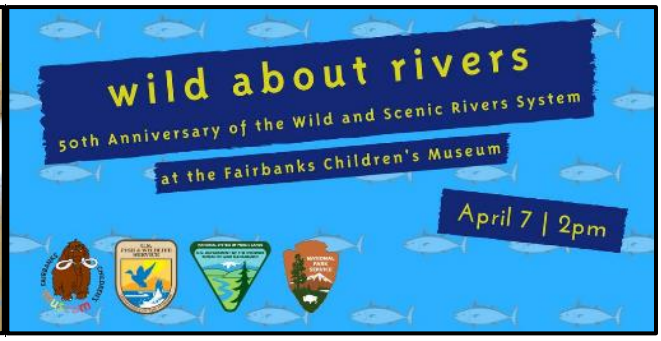
This year we introduced a new learning station about *Safety in Bear Country*, which included tips for staying safe and a demonstration on how and when to use bear spray.

A highlight every year is the BLM Smokejumpers' practice jumps. The weather was perfect, this year, and each day the Smokejumpers landed nearby during lunch and talked to students about what it's like to parachute into the Alaska wilderness and fight wildfires.

Celebrating Rivers and Trails

We joined the nationwide celebration of the 50th Anniversary of the National Wild and Scenic Rivers System and the National Trails System, by promoting the SNCA's Birch Creek WSR and the PMNRT at several events and celebrations in Fairbanks, Alaska:

- Fairbanks Outdoor Show – a three-day trade show for people to gear up and get excited for the upcoming summer. We provide information about places to go hiking, paddling, fishing, hunting, and more in the SNCA.
- Wild about Rivers - We partnered with the National Park Service (NPS) and the US Fish and Wildlife Service (USFWS) to host three family oriented educational outreach events to promote the 50th Anniversary of the National Wild and Scenic Rivers System.



Wild and Scenic River Management Workshop
To honor the 50th anniversary of the Wild and Scenic Rivers Act (WSRA), nearly 40 field-level federal managers and planners with responsibilities for designated WSRs in Alaska gathered on a wintery day in Fairbanks, Alaska for a management capacity-building mini workshop. The event, co-hosted and attended by BLM, USFWS, and NPS, provided in-person and webinar-delivered opportunities for managers to learn about the WSRA and the ways the 1980 ANILCA influences the WSRA.

BLM, USFWS, and NPS managers meet for a WSRA workshop in Fairbanks, Alaska.

Georeferenced PDF Maps
This year, BLM Alaska published maps of Federal Subsistence Hunt Areas, thereby expanding our offerings of digital maps designed for use on mobile devices. Because only unencumbered lands, such as the SNCA, are open to subsistence hunting under the ANILCA, the land status depicted on the digital recreation maps does not reflect areas open to the Federal hunt. The new map provides improved information regarding the SNCA, supports hunting activities, and aids public safety initiatives.

Fish and Wildlife

Caribou Monitoring and Subsistence Management
Managing the Fortymile Caribou Herd at a sustainable level is a current issue and area of focus.

ANILCA Title IV identified caribou range as a special value in the SNCA. The SNCA was heavily used, historically, as a calving area by the FMCH. This herd was known previously as the Steese-Fortymile Herd. In 1920 this herd was estimated to be 300,000 to 400,000 animals, but declined to an estimated low of 6,500 in the 1970s, by which time the herd used only a fraction of its former range. In 1994 an interagency and international group was formed with the goal of restoring the herd into its former range from north of Dawson City, Yukon through the SNCA. During the last decade, caribou

have expanded their range well into Canada and back into both units of the SNCA. Sightings of caribou along the Steese Highway are once again common; most of the harvest occurred in the Steese Highway area during the last two years; and a large portion of the herd has calved in the Birch Creek drainage, beginning in 2016. The herd expanded more than tenfold in numbers from 1973 to 2017, with a 2017 estimate of more than 85,000 caribou. Biologists are now concerned about the range because indicators of caribou nutritional condition have declined (e.g.. lower pregnancy rates). In addition, a small White Mountains caribou population exists in the SNCA and increasingly mixes with the expanding FMCH, complicating sport and subsistence harvest management.

In ANILCA Title VIII Section 802, Congress declared that fish and wildlife on federal lands in Alaska be managed for subsistence uses. Federal land management agencies in Alaska manage subsistence harvest of fish and wildlife on unencumbered federal lands. The Fortymile Caribou herd is the most important caribou subsistence resource in eastern interior Alaska, and is the primary herd within the SNCA. ANILCA Title IV identified caribou range as a special value in the SNCA. The Eastern Interior Field Office Manager has responsibility and authority to make in-season changes to federal caribou hunts, including emergency closure actions. Close coordination with the Alaska Department of Fish and Game (ADF&G), the NPS, and the ANILCA-mandated Regional Advisory Councils is required to manage the harvest, herd, and the herd range. BLM biologists have forged a partnership with the ADF&G to conduct population, distribution, harvest, and habitat monitoring (formalized under a cooperative agreement), and less formal partnership with other coordinators in herd and habitat management, including National Park Service and the Yukon Department of Environment and National Park Service.

Partnerships

Alaska Department of Fish and Game
BLM has long partnered with the ADF&G to monitor both the FMCH and the White Mountains caribou herds, including periodic telemetry flights to monitor distribution and conduct calving surveys, censuses, and fall composition counts. This aids in planning BLM habitat management as well as management of Federal subsistence harvest and is conducted through a cooperative agreement as well as individual agency contributions to equipment and field work. In recent years, this partnership has expanded to include the Yukon Department of Environment. Each agency has contributed towards joint research and monitoring activities. The NPS (Yukon-Charley Rivers National Preserve) has also contributed in this partnership, for example through initiation of development of a lichen cover map and by providing helicopter support of field work. In 2016, BLM initiated a cooperative agreement with the University of Montana to examine Fortymile caribou habitat relationships. All four agencies cooperate towards making this project a success. (See Science section for more detailed activities of these partnerships).

Hunter Ethics Working Group
In response to the concerns and requests of the Eastern Interior Alaska Subsistence Resource Advisory Council, the Federal Subsistence Management Program developed a hunter ethics education and outreach strategy in partnership with Federal and State land management agencies and various user groups. Our current strategy includes three action plans: 1) develop community liaisons and contact points to foster communication and distribute information, 2) provide outreach and education to military families interested in hunting, and 3) create a statewide media campaign to promote ethics and create unity and understanding between hunter user groups. Working group partners: Office of Subsistence Management, BLM, USFWS, and NPS, U.S. Air Force, Department of Defense, as well as State of Alaska, the Alaska Outdoor Council, University of Alaska Fairbanks, Tribes, Native Corporations, and Tanana Chiefs Conference. The working group also includes representatives from hunting organizations such as the Wild Sheep Foundation.

Interior Alaska Trails and Parks Foundation
This new non-profit partnered with us to help celebrate the 50th Anniversary of the National Wild and Scenic Rivers System and the National Trails System. They provided refreshments and door prizes.

Recreation and Visitor Services

This year, the BLM recorded higher numbers of recreational users in the SNCA with an estimated 13% increase over last year. Some of this higher visitation is due to changing caribou migration patterns and a larger population size increasing their availability in the SNCA during hunting season, thereby drawing hundreds of hunters and other visitors into the area.

The PMNRT continues to see robust use, with 2950 visitors hiking portions of the trail and 467 visitors through-hiking the entire trail.

Twelvemile Summit Trailhead – 10,231 visits
Eagle Summit Trailhead – 6,885 visits
Total 20,533 visits

Photos of the PMNRT by Crystal Glassburn

Birch Creek WSR float boating continues to be popular with more advanced boaters, with approximately 500 floaters completing the 110 miles between the put-in and the take-out.

Upper Birch Creek Wayside – WSR put-in – 6,433 visits
Lower Birch Creek Wayside – WSR take-out - 2,212 visits
Birch Creek Bridge – Motor Boat Launch – 267 visits
Dispersed Use – 9,476 visits
Total 27,059 visits

Volunteers

Artist-in-Residence
To commemorate the 50th Anniversary of the National Wild and Scenic Rivers System, Becca Rorabaugh was selected as an artist-in-residence to accompany BLM personnel on the monitoring float of Birch Creek WSR. During a week in August, along with another volunteer and two BLM staff, Rorabaugh paddled 110 miles. Highlights included migrating caribou, nesting peregrine falcons, solitary wolves, and late summer water levels high enough to run the rapids. This winter, Rorabaugh is creating oil paintings from the pictures and watercolor/gouache sketches she made while on the river. She will present her work to the public in the spring to kick off the summer paddling season.

Oil painting by Becca Rorabaugh, 2018 BLM artist-in-residence.

3 Science

Science

Lichen Map Completed
In FY2015, the BLM and several cooperating agencies (NPS, USGS, and the Yukon Department of Environment) began a project to map lichen cover to identify caribou habitat in the SNCA and across the range of the Fortymile Caribou Herd (in both the US and Canada). The agencies are working with their contractor, ABR Inc., to produce a consistent map across Alaska and Yukon. In 2017, BLM and Yukon Environment supported The University of Montana in field efforts to obtain very high resolution photography with Unmanned Aerial Vehicles (UAV). This effort greatly aided in the quality of the final map of lichen cover produced by ABR, Inc in 2018.

Caribou Resource Selection and Habitat Relationships
The BLM, ADF&G, Yukon Department of Environment, and NPS are cooperating to better understand how the FMHC utilizes habitats and how those habitats influence populations now and in the future. In 2016, the BLM established a Cooperative Agreement with the University of Montana through the Rocky Mountains Cooperative Ecosystem Study Unit to fund a graduate-level project to further this understanding. Field work in 2018 on the habitat relationships study with University of Montana indicated that lichen biomass is lower and willow browsing is more intense in the herd's recent-term core summer range than in more peripheral habitats such as the Steese area. Continuing increases in use could result in changes such as lower lichen cover and increasing bare ground. The habitat relationships study will further facilitate the design and interpretation of range monitoring programs.

Summer alpine caribou habitats in the Steese are predominantly undisturbed; forested habitats used in winter have been affected by fires (primarily those in 2004-05). In recent years, the growing FMCH herd has made increasing use of the SNCA during both winter and summer.

Food Habits and Habitat Selection
EIFO biologist and partner wildlife biologists continued efforts to document and monitor caribou food habits through collection of fecal samples (and some paired rumen samples from hunter-harvested caribou). In addition, a new method to determine food habits (as well as habitat selection) was implemented. In 2018, 17 video camera collars were purchased and fitted on adult female caribou. EIFO purchased 13 of the 17 collars and ADF&G fitted and deployed them on cow caribou near Eagle Summit. Yukon Environment purchased and deployed 4 collars to complete the 17 planned for 2018. These collars captured a GPS fix and a 9-second video clip every 20 minutes for 18

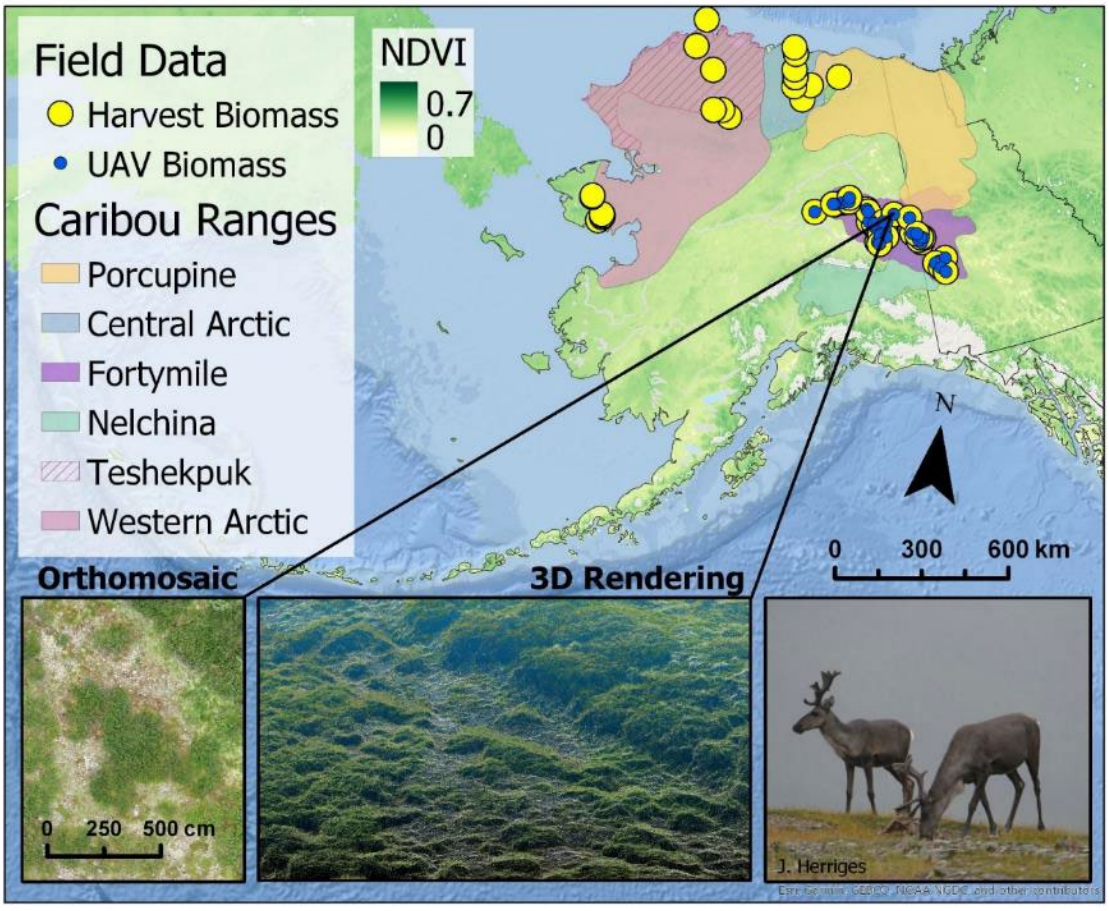
hours a day. The cows roamed back and forth several times across the herd range during the summer before the collar dropoff mechanisms fired. Collars were retrieved from where they fell on the ground and returned to manufacturer for downloading of files.

Three frames from caribou camera collar video clips: a newborn calf in late May, caribou huddled together to avoid bugs in early July, and a typical view of caribou foraging, in August.

From these projects on FMCH within the SNCA, University of Montana PhD students Eric Palm and Libby Ehlers, presented lichen mapping and food habits analysis to the annual meeting of the Alaska Chapter of the Wildlife Society. They received best student presentation and poster awards. Eric Palm also co-led a one-day workshop on Resource Selection Functions.

Caribou Habitat Characterization

Katie Orndahl a former intern at EIFO and now a Northern Arizona PhD student associated with a NASA ABoVE research project, returned this summer to collaborate with Libby Ehlers with a goal of characterizing plant biomass of caribou habitats using a multi-sensor equipped UAV. BLM biologists, a Yukon Environment technician, Ehlers and a University of Montana crew, and Orndahl joined forces in quantifying plant cover and biomass at 33 alpine field sites scattered throughout the FMCH range. Forage samples for quantifying forage quality were also collected.



A map of habitat sampling sites within the Fortymile Caribou Herd range, and resulting imagery from a shrub-lichen plot. (provided by Katie Orndahl)

Mine Reclamation Wildlife and Habitat Surveys
In June 2018, four historically mined plots in the Nome Creek area were surveyed as part of a SO-led statewide study on wildlife and habitat on mine reclamation sites. Dozens of different vegetation, wildlife, and habitat metrics were gathered on the study plots. This information is being used to inform BLM Alaska mine reclamation policy. A final report will be issued in 2020.

Birch Creek
The BLM and Alaska Department of Environmental Conservation (ADEC) continue to collaborate on a multi-year monitoring project, initiated in 2014, documenting flows and water quality of Birch Creek WSR. Other BLM and ADEC collaboration examples include a Quality Assurance Project Plan (QAPP) for surface water monitoring of Birch Creek above Twelvemile Creek near Central, Alaska and an ADEC investigation spurred from satellite telemetry acquired from the BLM at the Birch Creek water quality monitoring/stream gage station which resulted in an enforcement action against a placer-miner illegally discharging highly turbid waste-water into Birch Creek.

In support of ongoing cooperative monitoring programs BLM continued to operate an automated stream gage with GOES satellite telemetry, about 0.25 miles upstream of the BLM Birch Creek Wayside at MP 94 Steese Highway. Data collection of water stage, water temperature, air temperature, cumulative precipitation and water turbidity occurs at 15-minute intervals. Hourly data is available for public viewing on-line at the following NOAA web sites:
https://hads.ncep.noaa.gov//cgi-bin/hads/interactiveDisplays/displayMetaData.pl?table=dcp&nesdis_id=32B3986C

Flow information is also available at:
NOAA Hydrometeorological Automated Data System (HADS)
and entering the NESDIS ID = 32B3986C or the NWSLI ID= BCTA2.

Photograph showing BLM automated stream gage instrument shelter and GOES satellite telemetry antenna, top center of photograph, at Birch Creek WSR River Mile 0.

Providing real-time climate and streamflow data represents a major benefit to recreational boaters planning float trips for fishing, hunting, and wildlife viewing. Floatability improves with additional water in the Creek. Stage of less than 1.0 foot is very low flow, making it difficult for floating. Stage of 2 feet is moderate flow, representing good float conditions, and stage of 3 to 3.5 feet is near bank full, reducing gravel bar camping opportunities. The BLM is in the process of developing a stage-discharge rating curve for the new Birch Creek stream gage location. Current observations are available to the public on the National Weather Service's Hydrometeorological Automated Data System (HADS) website (https://hads.ncep.noaa.gov/charts/AK.shtml)

Science Plan

A science strategy plan for the SNCA and White Mountains NRA is being developed to prioritize and coordinate research efforts and scientific outreach in accordance with the goals of the National NLCS Science Strategy. The plan is near completion and will be submitted to the Alaska State Office in FY2020.

4 Resources, Objects, Values and Stressors

Caribou Range

Upon the SNCA's establishment in 1980, Congress directed the BLM to consider the special value of caribou range in the conservation area's management. Two caribou herds occupy lands within the SNCA and the White Mountains NRA. The White Mountains Caribou Herd resides year-round in the White Mountains NRA and SNCA North Unit, while the much larger FMCH seasonally occupies the North and South SNCA units and the White Mountains NRA as well as lands to the southeast. In 1920 an estimated 570,000 Fortymile caribou crossed the Steese Highway to calving grounds in the WMNRA and North Unit of the SNCA. Numbering an estimated 83,000 caribou in 2017, the Fortymile Herd is one of Alaska's most important herds for subsistence and sport harvest.

Caribou Range interagency monitoring includes caribou numbers, productivity and survival, movements and distribution, food habits, and assessment of vegetation from ground plot to satellite imagery scales.

Caribou Range Status and Trend Table

***Excellent, Good, Fair and Poor are qualitative terms and are based on professional judgement intended to provide a simple overview of resource status.**

Status of Resource, Object, or Value	Trend
*Good	Stable

Caribou Range Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY18
1,200,000	1,200,000	100% of unit has suitable caribou range. However, the herd moves throughout the unit as indicated in the narrative above.	1,200,000

Stressors Affecting Caribou Range

Caribou Populations
Caribou can degrade range quality through overuse. Caribou population, movements, and distribution monitoring continue through interagency cooperation. Habitats are monitored at varying scales -- from ground plots to satellite imagery. Understanding the interaction of weather, climate, fire, caribou population and distribution across habitats as well as caribou productivity and survival are all important in managing the herd, habitat for the herd and providing subsistence opportunities as required by the ANILCA.

Cultural Resources

There are 51 historic archaeological sites in the confines of the SNCA, including Birch Creek Wild River, which flows through the southern unit of the SNCA. Almost all of the known historic sites are habitation sites containing at least one log cabin, were inhabited by Euroamericans, and post-date the 1893 discovery of placer gold at Pitka's Bar on Birch Creek. The remaining historic cabin sites are trapping related. Most of these cabin sites are now collapsing and in a state of ruin. Based upon artifacts and historic documentation, the sites date variably from the early-1900s through the 1970s or 1980s. Cabins with evidence of a post-1960 occupation most often have evidence of earlier occupations; they were refurbished and reused.

There are 38 known prehistoric sites within the SNCA. They are all shallowly buried or surface lithic sites, and therefore likely late prehistoric and occupied by Athabaskans. Most are located on high promontories with scenic views, and therefore are likely hunting lookout sites for large game animals, primarily caribou. There is one potential early historic Athabaskan village site along Birch Creek, which may have once contained a prehistoric component. However, the location of this site is known only from historic documentation, and it has never been verified archaeologically despite repeated attempts to locate it over the past four decades. It most likely has eroded into the river and is completely gone.

None of the sites in the SNCA have been evaluated for eligibility to the National Register of Historic Places, although field notes indicate that many have, or likely have, some buried, undisturbed deposits, which along with other variables may make them eligible to the Register. Cultural resource monitoring and inventory in the SNCA has been sporadic, and dictated by the availability of funds and the logistical constraints associated with the size of the unit and lack of roads and trails. This is particularly acute in the southern unit of the SNCA, where there are no outside trails into most of the unit, where access is limited to walking in from Birch Creek and via expensive helicopter. Existing sites that are regularly monitored are selected primarily on logistical ease, including those that are accessible by OHVs and by means of floating the Birch Creek Wild River.

Areas designated for cultural resource survey are identified based on an assessment of areas that might be adversely impacted by visitation and permitted activities (e.g., small-scale placer mining activities), as well as areas where limited or no information on the presence and distribution of cultural resources exists. This approach helps minimize the potential for impact to cultural resources while increasing knowledge of new areas.

Cultural Resources Status and Trend Table

***Excellent, Good, Fair and Poor are qualitative terms and are based on professional judgement intended to provide a simple overview of resource status.**

Status of Resource, Object, or Value	Trend
*Good	Stable

Cultural Resources Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried/# of Objects Identified	Acres Possessing Object	Acres Monitored in FY18
1,267,000	1-2%	difficult to determine with only 1-2% of the unit surveyed	0 Acres

Cultural Resources Inventory, Assessment, Monitoring Table (Continued)

Acres in Unit	Number of objects identified by survey	Number of objects identified as possessing value	Number of Cultural Resource sites monitored (of those possessing object or value) in FY18
1,267,000	89	89	0

Stressors Affecting Cultural Resources

As yet, both intentional and unintentional adverse impacts to cultural resources have been relatively minor in the SNCA, and limited to collection of surface artifacts at visible sites. This is largely due to the logistical challenges associated with accessing most of the unit. There were no significant wildfires in the SNCA in 2018, which have the potential to affect resources directly through burning and also through exposure of sites to increased visitation and potential looting.

Birch Creek

In 1980, Congress directed the BLM to consider Birch Creek's special value in management of the SNCA and designated the 126-mile-long corridor as a WSR. Extensive mining for placer gold has occurred in the Birch Creek drainage since the late 1800s. Early gold operations mined streambed gravels—in many cases from valley wall to valley wall—with little or no reclamation. Six federal claims exist within the SNCA and

none of these federal mining claims currently exist within the Birch Creek WSR corridor, although abandoned mine land features are present in some areas. Three segments in the Upper Birch Creek drainage were identified as water quality-limited in Alaska's Statewide Water Quality Reports (April 1992, July 1995 and June 1996) and include: Alaska ID Number Waterbody-Segment 40402-001 Birch Creek Drainage: Upper Birch Creek, Eagle Creek, and Gold Dust Creek. Study Area Boundaries included the Upper Birch Creek drainage from its headwaters to the confluence of Birch Creek and Twelvemile Creek. Placer mining operations that lacked erosion and effluent control measures have been the principle cause of elevated turbidity levels. Although recent regulatory enforcement has improved water quality downstream of the active mines, protecting Birch Creek water quality continues to be a substantial challenge.

Birch Creek Status and Trend Table

***Excellent, Good, Fair and Poor are qualitative terms and are based on professional judgement intended to provide a simple overview of resource status.**

Status of Resource, Object, or Value	Trend
*Fair	Improving

Birch Creek Inventory, Assessment, Monitoring Table

Miles in Unit	Miles Inventoried	Miles Possessing Object	Miles Monitored in FY18
126	126	100%	110

Stressors Affecting Birch Creek

Mining Activity

Of the six federal mining operations in the SNCA, three are actively mined. Non-point source pollution affecting water quality in Birch Creek is a consideration on all operations. Other issues affecting the resource include solid waste cleanup and reclamation.

Abandoned Mine Reclamation

Many areas of the SNCA have been previously mined, with little or no reclamation completed. Abandoned placer mines need to be reclaimed by reestablishing native vegetation and restoring channels to a more natural and stable form.

Current/Future Mining on Non-BLM Managed Lands

The SNCA and Birch Creek headwaters area is highly mineralized and of interest for further exploration and development by the mineral industry. The headwaters area has mixed ownership comprised of BLM and state managed lands, with active mining

claims. Mining activity upstream and adjacent to the SNCA boundary has the potential to adversely impact water quality, fish, and aquatic resources within the SNCA. Monitoring and enforcing mitigation measures, as well as the use of improved mining and reclamation techniques, aim to reduce adverse impacts to the resources adjacent to and within the SNCA.

Warming Climate Trends

The SNCA landscape increasingly shows impacts due to a warming climate, including vegetation changes, especially those from more frequent wildfires, and soil instability with the loss of permafrost.

5 Summary of Performance Measure

Please provide a brief qualitative summary of the status of Resource, Objects, and Values (ROVs) listed in the previous section. This summary and the below table are intended to provide a simple overview of the prior section—no additional information is being requested here.

Resources, Objects, and Values Status Summary Table

***Excellent, Good, Fair and Poor are qualitative terms and are based on professional judgement intended to provide a simple overview of resource status.**

Resource, Object, or Value	Status	Trend
Caribou Range	*Good	Stable
Cultural Resources	*Good	Stable
Birch Creek WSR Water Quality	*Fair	Improving

The basis for the determination of the status and trend for Birch Creek Water Quality includes:

a) In 1996, streams within the upper Birch Creek drainage were identified as “water quality limited” due to violations of the turbidity standard, primarily from point and non-point sources associated with placer mining activities. Available water quality data indicated that waters of upper Birch Creek above Twelve-mile Creek persistently exceeded the criteria for turbidity. The Environmental Protection Agency (EPA) subsequently issued a Total Maximum Daily Load (TMDL) for turbidity of 5.85 Nephelometric Turbidity Units (NTU) for upper Birch Creek (USEPA, 1996).

b) In 2018, automated monitoring at the Birch Creek MP94 stream gage, documented daily median turbidity levels of less than one NTU, similar to 2017 and well within the TMDL of 5.85 NTU.

c) The BLM is in the process of compiling water quality data for five (5) contiguous years (2017-2021) at the new stream gage/water quality monitoring station location. In 2021 data will be submitted to ADEC for evaluation to adjust the category level and/or lead to a delisting.

d) Periodic short-term elevated turbidity levels from nonpoint sources, such as stream bank erosion, and re-suspension of deposited sediment, continue to be problematic. As an example, May 22, 2018 storm runoff resulted in several days of elevated turbidity (>25 NTU) (see photo p.26).

e) Reducing placer mine impacts to Birch Creek water quality represents an on-going challenge; however, the long-term trend is that water quality continues to improve. The BLM is in the process of compiling intermittent water quality date for years prior to 2014 for review and publication.

Upstream view of Birch Creek near River Mile 0 (south side of the Steese Highway in T.7 N., R.10 E, Fairbanks meridian) showing moderately elevated turbidity from storm water runoff, May 22, 2018.

Reference:

U.S. Environmental Protection Agency. 1996. Total maximum daily load for turbidity in Upper Birch Creek, Alaska: TMDL issued by U.S. Environmental Protection Agency, accessed at http://www.dec.state.ak.us/water/tmdl/approvedtmdls.htm

Water quality data used in support of status summary are unpublished field data collected by the BLM.

6 Manager's Letter

Transition and change will be the continued themes for the SNCA. We are currently working with the contractor Logan Simpson to develop the travel management plan for the SNCA and the White Mountains NRA. We are currently in the route evaluation phase and public meetings are planned for the fall of 2019.

Subsistence hunting on Federal lands in Alaska will continue to grow in importance for rural Alaskans. While we continue to manage caribou habitats in the SNCA, we collaborate with partners to manage harvests and habitats on a regional/landscape level. With increased growth of subsistence and recreational activities in the SNCA, implementation of a travel management plan to address resource impacts is timely.

Current legal proceedings regarding navigability are likely to have management implications that will need to be addressed in the future.

Significant progress was made during 2018 to finalize our science plan. That plan covers the SNCA as well as the adjacent White Mountains NRA, also managed by the Eastern Interior Field Office. Despite a focus on developed recreation in the WMNRA, the connection between the two areas' natural resources includes caribou migration and calving. Developing a plan to address the resources and opportunities of both areas will assist us in managing this habitat at a larger scale, and allow us to better track the science being conducted in both areas. The science plan will focus on research partnerships, and with the new science grant procedures being implemented nationally, we hope to identify research partners and opportunities, monitor their work and highlight their findings, as the data will help inform management decisions.

As we transition into 2019, we are encouraged by the opportunities ahead to implement RMP decisions and finalize a science plan for this unique and important resource.

Steese

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