



**NATIONAL
CONSERVATION
LANDS**

Steese

National Conservation Area



Alaska

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
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Steese

National Conservation Area

Designating Authority

Designating Authority: Alaska National Interest Lands Conservation Act, PL 96-487

Date of Designation: December 2, 1980

The Steese National Conservation Area (Steese NCA) includes the North and South Units, totaling 1.2 million acres, designated by Congress through the Alaska National Interest Lands Conservation Act (ANILCA). The Steese NCA is managed to maintain environmental quality with a careful balancing of multiple use and sustained yield, with particular attention to the special values of caribou range and Birch Creek.

Additional Designations

Birch Creek Wild and Scenic River (WSR) was designated by ANILCA, as “wild” under the Wild and Scenic Rivers Act (PL 90-542). The 126-mile Birch Creek WSR flows through the South Unit of the Steese NCA for 77 miles and is managed for its water quality, free-flowing condition, and Outstandingly Remarkable Values of scenery, recreation, and fish diversity.

Pinnell Mountain National Recreation Trail (NRT) was added to the National Trails System (PL 90-543) in 1971. This 27-mile trail follows the southern boundary of the Steese NCA’s North Unit for 18 miles as it traverses tundra-covered alpine ridges.

The Steese NCA includes two Research Natural Areas (RNAs) managed for research and education: Mount Prindle RNA and Big Windy Hot Springs RNA.

Site Description

The two units of the Steese NCA encompass the forested valleys, marshy lowlands, and broad, tundra-covered ridges of several small mountain ranges of the Yukon-Tanana Uplands. The area plays a major role in the annual life cycle of the Fortymile and White Mountains caribou herds, offering migration corridors, crucial summer calving grounds in high alpine tundra, and winter ranges among lichen-rich black spruce forests.

Steese National Conservation Area Offerings

Just a couple hours’ drive from Fairbanks, Alaska, the Steese NCA’s remote lands provide ample opportunity for backcountry recreation and subsistence activities year-round. Summer visitors camp, hunt, fish, pick berries, hike, backpack, float rivers, and explore the area’s gold mining history. In addition to the spectacular winter scenery and

northern lights, winter visitors enjoy snowmobile adventures, dog mushing, hunting, trapping, and skiing.

The remote North and South units of the Steese NCA are primarily accessed from primitive roads and trails along the Steese Highway. Five waysides provide visitor facilities and access to the Steese NCA's primary recreation offerings: a 110-mile float on Birch Creek WSR and a 27-mile hike on the Pinnell Mountain NRT.

2020 Accomplishments

- Managed the federal subsistence hunt for the Fortymile Caribou herd, requiring coordination with partners to monitor the herd's status
- Strengthened partnerships to investigate caribou range
- Prepared for the Environmental Analysis of the Travel Management Plan
- Provided real-time, web-accessible water and climate data for Birch Creek WSR for planning recreational boating trips and monitoring river conditions
- Kept recreation sites open during the pandemic and expanded web information

Future Priorities and Opportunities

- Complete the Steese Area Travel Management Plan
- Repair portions of the Pinnell Mountain NRT damaged by off-highway vehicles (OHVs) during the Fortymile caribou hunt
- Provide seasonal staff for a new Alaska Public Lands Information Center in Tok, Alaska to expand public outreach on Steese NCA values and opportunities
- Clean up abandoned property at former mine sites
- Improve visitor use monitoring and technology for counting visitation
- Prepare for the development of the Steese Recreation Activity Management Plan and Birch Creek Comprehensive Wild and Scenic River Management Plan

Steese

National Conservation Area

Eastern Interior Field Office
222 University Ave.
Fairbanks, AK 99709
Phone: 907-474-2200

NCA Manager: John Haddix

Site Web Address: <http://www.blm.gov/visit/steese-nca>

Map of Steese NCA



1 Steese Overview

Acreage

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

*State and private acres are not part of the total unit acres

Budget

Budget Title	Code	Funding
Monuments & Conservation Areas	1711	\$ 485,306.00
Forestry	1030	\$ 741.00
Cultural Resources	1050	\$ 19,000
Aquatic Resources	1160	\$ 40,924.00
Wildlife Management	1170	\$ 42,131.00
Recreation & Visitor Services	1220	\$ 109,592.00
Cadastral, Lands and Realty Management	1440	\$ -
Maintenance and Ops	1660	\$ 11,240.00
Mining Law Administration	1990	\$ 436.00
Total Budget		\$ 665,488.00

Current Areas of Focus

The highest priority work in the Steese NCA focuses on caribou habitat, Birch Creek monitoring, and visitor management. This year the BLM also faced the additional challenges associated with operating during a global pandemic and keeping staff safe.

Fortymile Caribou Herd

ANILCA identified caribou range as a special value for the Steese NCA. In Title VIII of ANILCA, Congress also established a priority for use by rural residents of subsistence resources and directed federal agencies to minimize adverse impacts upon subsistence uses and resources. The Fortymile Caribou Herd is an important subsistence resource in eastern Interior Alaska and is the primary herd within the Steese NCA. Today the

cooperative management of the Fortymile Caribou Herd remains a priority in the Steese NCA.



A small group of Fortymile caribou graze on a windblown ridge in the Steese NCA.

The Fortymile Caribou Herd, formerly known as the Steese-Fortymile Herd, historically used lands now within the Steese NCA as a calving area. In 1920, this herd numbered several hundred thousand 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. Since 1994, an interagency, international group has worked to restore the herd into its former range, which once spanned from north of Dawson City, Yukon, Canada through the Steese NCA. The cooperative effort of the Harvest Management Coalition saw successes during the last decade as caribou have expanded their range back into both units of the Steese NCA.

In 2017, the Alaska Department of Fish and Game (ADF&G) estimated the herd grew to a population of 83,000 animals. Changes in population and distribution of the large Fortymile Caribou Herd have created multiple management challenges. With the increased herd size, biologists became concerned about the quality of the range because some indices of herd condition suggested a decline in nutritional status. The Harvest Management Coalition addressed these concerns with recommendations to slow the herd's growth in the newly approved *Fortymile Caribou Herd Harvest Plan 2019–2023*.

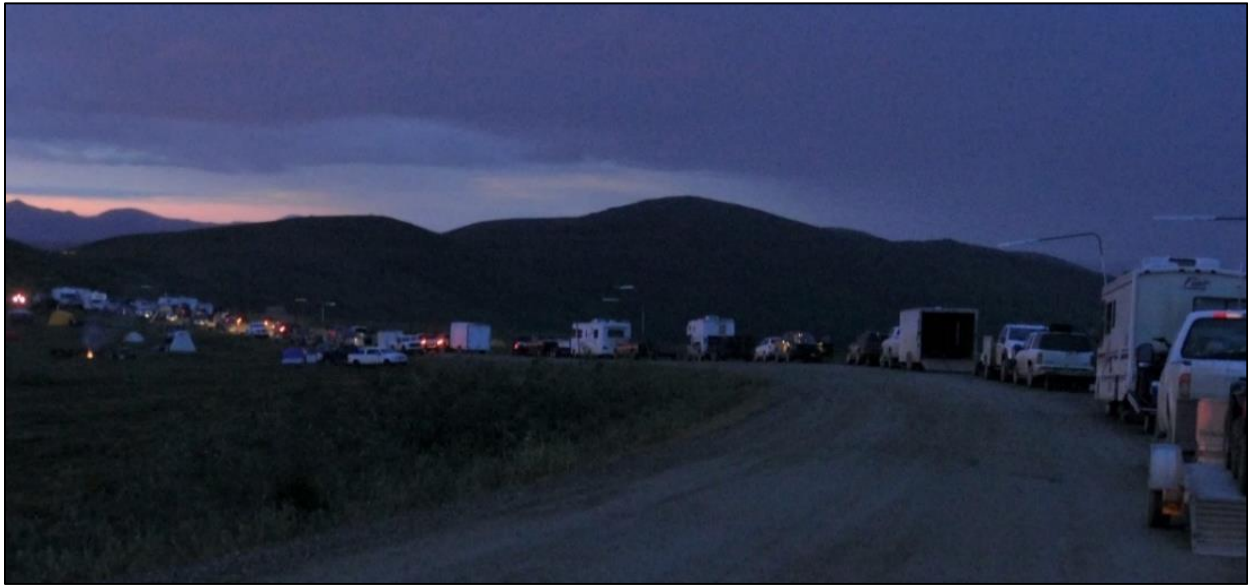
Management of federal subsistence harvest requires coordination with ADF&G regulations and management as well as the ability to respond quickly with needed changes in regulations. To acquire the flexibility needed, BLM's Eastern Interior Field Office (EIFO) submitted a proposal through the Eastern Interior Subsistence RAC for the Federal Subsistence Board to authorize the EIFO Field Manager to set season dates, harvest limits, and sex restrictions for subsistence hunters on federal lands within Fortymile caribou hunt areas. After approval of the proposal, EIFO opened the subsistence season nine days earlier than the State season to provide a greater opportunity for subsistence users, and later increased the harvest limit to two caribou.

This year, a midsummer ADF&G population estimate indicated that, after years of steady increases, the herd had declined by 30% since 2017. Indices such as birth rates and calf weights suggested that the herd continued to be nutritionally stressed. Considering this information, ADF&G judged that preventing long-term impacts to the herd's forage from heavy grazing necessitated shifting tactics from slowing the herd's growth to reducing its size through harvest. In so doing, the agency expected improvements in the smaller herd's nutritional condition to help slow or arrest a more protracted and precipitous population decline. ADF&G set the bag limit to two caribou and the fall harvest quota at 5,000 caribou.

ADF&G's announcement added to the growing popularity of the Fortymile hunt, which during the past three years has seen large numbers of caribou migrating along and near the Steese Highway. As a result, the 2020 hunt attracted a record number of hunters to the Steese area from across the state. More than 18,000 registration permits were issued. In the Steese area, 1,200 caribou were harvested on the first day and 4,000 caribou were harvested within a month. This created several management challenges from crowding and heavy use of sites, especially concerning OHVs.

For more information about the challenges associated with the large caribou hunt see [Chapter 1: "Steese Overview: Current Areas of Focus, OHV Impacts to Pinnell Mountain National Recreation Trail"](#) and [Chapter 2: "Programs and Accomplishments, Recreation and Visitor Services, Visitor Use Impacts."](#)

More information about our work to support range management of the Fortymile Caribou Herd can be found in [Chapter 2: "Programs and Accomplishments, Wildlife Resources, Fortymile Caribou Herd;"](#) [Chapter 2: "Programs and Accomplishments, Partnerships, Fortymile Caribou Herd Partnership;"](#) and [Chapter 3: "Science: Fortymile Caribou Herd Habitat."](#) For the current status of this important NCA resource refer to [Chapter 4: "Resources, Objects, Values and Stressors, Caribou Range."](#)



Vehicles parked along the Steese Highway near Eagle Summit Wayside the evening of August 9, 2020, the day before opening day of caribou hunting.

Birch Creek Wild and Scenic River

ANILCA directed management of the Steese NCA to protect the values of Birch Creek and amended the Wild and Scenic Rivers Act to designate 126 miles of upper Birch Creek as “wild,” to be managed to protect and enhance the river’s water quality, free-flowing condition, and Outstandingly Remarkable Values of scenery, recreation, and fish diversity. Approximately 77 miles of Birch Creek WSR flows through the South Unit of the Steese NCA, which encompasses most of the headwaters of this clear-water tributary to the Yukon River.

In cooperation with the U.S. Geological Survey (USGS) and National Weather Service (NWS) the BLM utilizes stream gage stations to document water levels on Birch Creek providing real-time data to the public for planning recreational boating trips as well as monitoring flood hazards for public safety. The BLM continues to work with Alaska Department of Environmental Conservation (ADEC) to better understand the extent to which natural versus anthropogenic sources contribute to elevated turbidity levels in Birch Creek during high-water events. The BLM has recently noted accelerated erosion in areas due to warmer annual temperatures resulting in instability and erosion of permafrost soils, which contribute to elevated turbidity levels during high-water events.

To learn more about monitoring water on Birch Creek WSR see [Chapter 2: “Programs and Accomplishments, Aquatic Resources, Birch Creek Water Quality Monitoring;”](#) [Chapter 2: “Programs and Accomplishments, Partnerships, Birch Creek Water Quality](#)

[Monitoring Partnerships;](#)” and [Chapter 4: “Resources, Objects, Values and Stressors, Birch Creek Wild and Scenic River Water Quality.”](#)

Comprehensive Travel and Transportation Management Planning

In December 2016, the BLM completed a resource management plan (RMP) for the Steese NCA. The RMP determined the OHV area designations to be “limited” and identified interim management decisions for OHV use on BLM-managed public lands. The plan directed the BLM to develop a Comprehensive Travel and Transportation Management Plan (TMP) to establish OHV management decisions and establish allowable uses in the Steese NCA.

The goal of the TMP is to provide for and improve sustainable access opportunities for a range of motorized and non-motorized uses on public lands while protecting resources and minimizing conflicts among various users.

Work on the TMP began in 2019 with a public review of the route inventory, including four public meetings and a comment period. This year, the BLM’s TMP interdisciplinary team (ID team) continued to work with the contractor, Logan Simpson LLC, and completed the evaluation of over 400 miles of inventoried routes. In July, wildlife and recreation staff used a helicopter to photograph the inventoried routes to document their current condition and to inform the route evaluation. The ID team used this information to develop alternatives and prepare for an environmental analysis to be completed in the spring of 2021. After the analysis is complete, the next steps will be to finalize and publish the TMP and follow the rule-making process to inform the public.

More details about the TMP can be found in [Chapter 2: “Programs and Accomplishments, Public Access, Comprehensive Travel and Transportation Management Plan.”](#)

OHV Impacts to Pinnell Mountain National Recreation Trail

The 27-mile long Pinnell Mountain NRT is an alpine hiking trail that follows the ridges of the southern boundary of the North Unit of the Steese NCA. The trail was nominated as a component of the National Trails System in 1971, prior to the establishment of the Steese NCA. As surrounding lands were selected and conveyed to the State of Alaska, the BLM retained a 100-foot trail corridor and several parcels to support the trail. Today, the Pinnell Mountain NRT continues to provide one of the few maintained, road accessible thru-hikes in Interior Alaska.

The Pinnell Mountain Recreation Management Zone, established in the December 2016 *Record of Decision and Approved Eastern Interior Resource Management Plan for the Steese Subunit*, is managed to provide high-quality backpacking (multi-day) and hiking (day use) opportunities for users who desire a recreation experience characterized by solitude, tranquility, self-reliance, challenge, and risk in a Semi-Primitive Interior Alaska

setting, on one of America's National Recreation Trails. The primary focus of the zone is to manage for non-motorized backpacking and hiking opportunities.

Two trailheads are located along the Steese Highway, where the BLM maintains waysides with informational kiosks, outhouses, and trash receptacles. Both waysides, Eagle Summit and Twelvemile Summit, are situated on BLM-managed land. However, the 100-foot-wide trail corridor crosses State land before reaching the Steese NCA. The use of motorized vehicles has been prohibited on the trail or within the entirety of the trail's 100-foot corridor since the NCA's first resource management plan in 1986 as part of the management strategy to provide the semi-primitive backpacking and hiking experience and minimize trail damage. The BLM and volunteers have constructed boardwalks, rock work, and other trail features to protect fragile permafrost soils and aid hikers in navigating the rugged ridgeline trail. These features cannot withstand motorized vehicle traffic. However, cross-country use of light OHVs is a generally allowed use on State land, and there are no additional protections on the State lands surrounding the trail. Typically, the area does not attract motorized use.

During the state and federal caribou hunts, the Pinnell Mountain NRT trailheads at Twelvemile Summit and Eagle Summit waysides have seen increased use by hunters for off-highway parking, level ground for camping, and availability of trash receptacles and outhouses. The high-elevation waysides provide good access to the ridges where the caribou could be found, and many hunters used OHVs to reach hunting sites from the waysides. In recent years, as the size and duration of the Fortymile caribou hunt has increased, the BLM has observed greater use and impacts at waysides and along the trail.

On the first day of the State fall caribou hunt in 2019, the NRT sustained damage at both trailheads. At Twelvemile Summit OHVs paralleled the trail, creating a muddied and rutted track within the corridor. At Eagle Summit OHVs cut across the trail switchbacks. With the hunt still ongoing, the BLM immediately installed temporary orange fencing at the trailheads. This fencing helped to direct traffic away from the trail and stopped use of the tracks. At Twelvemile Summit, a second trail developed on State land beyond the trail corridor as hunters continued to use OHVs during the hunt. At Eagle Summit, the fencing dispersed users with no further trail development around the trailhead. After the hunt closed, the BLM removed the fencing. In the spring of 2020, EIFO resources and recreation staff worked to restore the rutted track at Twelvemile Summit.



During the Fortymile caribou hunt in 2020, the Eagle Summit Wayside and shoulders of the Steese Highway were congested with parking and camping to access hunting sites.

In preparation for the 2020 fall caribou hunt, BLM again erected the orange fencing and increased signage for hunters at the trailheads. This successfully prevented further use of tracks created in 2019 near the trailheads. Due to the large hunt this year, the two waysides quickly filled with hunters, so most hunters established camps elsewhere along the highway or at other sites without BLM signage about the trail. Hunters riding OHVs accessed the trail from along the Steese Highway and caused damage to over a mile of the hiking trail on the ridge above the Eagle Summit Wayside. The damage occurred away from the highway where it was not possible to erect fencing to discourage use during the hunt. The damages from OHV use includes deep ruts, erosion and water control issues, obliterated vegetation, and damaged trail improvements. Snow and frozen temperatures have prevented further damage from occurring as the BLM makes plan to repair the trail.



A section of trail-hardening geoblock is covered in mud after off-highway vehicles severely impacted over a mile of the non-motorized hiking trail on the Pinnell Mountain NRT.

In June 2021, the BLM is planning a large effort to restore damaged sections of the trail and rehabilitate the tundra. Even with active efforts, the BLM estimates the tundra damage could take decades for complete restoration due to the challenging growth conditions of the trail's alpine environment: long winters, cold summers, permafrost, and strong winds.

As 2020 ends, the BLM is evaluating repair options and soliciting input from interested stakeholders and State partners to develop a collaborative recovery strategy that includes outreach efforts to educate users and prevent similar events in the future. Many members of the public have expressed their concerns about the damages and have engaged the BLM to help find a solution and to volunteer to help with a repair effort. For more background and context for this issue, see [Chapter 2 "Program and Accomplishments, Recreation and Visitor Services, Visitor Use Impacts."](#)

COVID-19

On March 22, 2020, all employees not performing or supporting mission-essential functions began teleworking due to the COVID-19 pandemic. In the Steese NCA, recreation and maintenance staff ensured continued public access to clean, well-stocked facilities, while the hydrology staff set up and maintained automated river gages so visitors planning to visit Birch Creek WSR could monitor river conditions online.

To ensure the health and safety of employees conducting field work, the BLM Fairbanks District Office established protocols to minimize the risk of exposure and transmission of COVID-19. These protocols included actions for traveling in government vehicles, utilizing aircraft for BLM projects, or working in BLM facilities. In addition, managers required a risk management assessment that specifically included COVID-19 considerations for all field activities or individual resource projects. Risk management assessments and safety protocols enabled staff to safely conduct other important field work, such as archeology surveys and helicopter flights of inventoried routes. Although COVID-19 presented a challenge in 2020, flexibility and diligent implementation of the COVID protocols enabled our work to be completed safely.



In June, large areas of avens bloom in synchrony along the Pinnell Mountain NRT.

Planning and NEPA

Resource Management Plan

Record of Decision (ROD) and Approved Eastern Interior Resource Management Plan, Steese Subunit, signed December 2016.

Activity Plans

After completing the Resource Management Plan, several step-down activity plans are due for revision. The following list includes the step-down activity plans in the order in which they will be completed.

- *Comprehensive Transportation and Travel Management Plan* in preparation*
- *Recreational Activity Management Plan*, October 1993
- *Birch Creek National Wild and Scenic River Management Plan*, December 1983

*Logan Simpson LLC is currently contracted to complete this plan under direction of the BLM. See [Chapter 2 "Programs and Accomplishments, Public Access, Comprehensive Travel and Transportation Management Plan."](#)

RMP Implementation Strategy Summary

In addition to the activity plans listed above, the RMP implementation strategy includes the following actions and plans identified in the Record of Decision:

- Publish supplemental rules to implement the Steese TMP (To be completed soon after approval of the TMP)
- Revoke ANCSA 17(d)(1) withdrawals in areas the RMPs open to mining (No due date established in the ROD)
- Recommend new Federal Land Policy and Management Act (FLPMA) withdrawals for areas closed to mining (No due date established in the ROD)
- Notify Congress of closure of more than 100,000 acres to leasable minerals per FLPMA
- Complete Watershed Management Plans for Birch Creek and Preacher Creek (Due within five years of ROD or by management direction)
- Develop regional scale water quantity and quality monitoring strategy (No due date established in the ROD)
- Inventory, model, analyze, and monitor air resources on an annual, biannual, or quarterly schedule, or as directed by resource managers (No due date established in the ROD)

- Conduct pro-active field surveys for cultural resources per Section 110 of the National Historic Preservation Act (Ongoing. See [Chapter 2: “Programs and Accomplishments, Cultural Resources.”](#))
- Complete inventory and mapping for noxious and non-native invasive plants at disturbed sites, along trails, and within the Birch Creek WSR corridor (Due within five years of signing the ROD or by management direction)
- Develop a Special Status Species management plan in cooperation with ADF&G (No due date established in the ROD.)

Staffing

The Steese NCA is administered by EIFO, which is also responsible for the several Congressionally-designated Special Areas. The field office staff are responsible for 6.6 million acres, including the Steese NCA and Birch Creek WSR, as well as the White Mountains National Recreation Area (NRA), Beaver Creek WSR, and the Fortymile WSR. The following table summarizes the positions and percentage of time dedicated to Steese NCA duties.

Table of Steese NCA Staff

Position	Series/Grade	% Time Dedicated	Home Office*
Field Manager	0301/13	10	FO
Assistant Field Manager/Resources – Steese NCA Manager	0301/12	20	FO
Assistant Field Manager/Visitor Services	0301/12	20	FO
Archaeologist	0193/12	10	FO
Archaeologist - Seasonal	0193/9	5	FO
Fish Biologist	0482/11	10	FO
Hydrologist	1315/11	10	FO
Physical Science Technician (Hydrology) – Seasonal	1311/5	25	FO
Physical Scientist	1301/11	10	FO

Position	Series/Grade	% Time Dedicated	Home Office*
Realty Specialist	1170/11	10	FO
Wildlife Biologist	0486/11	10	FO
Wildlife Biologist	0486/11	50	FO
Outdoor Recreation Planner	0023/11	25	FO
Interpretive Park Ranger	0025/9	50	FO
Park Ranger – Seasonal	0025/7	90	FO
Natural Resource Specialist – Minerals	0401/9	10	FO
Geologist – Minerals	1350/9	20	FO
Science Technician – Seasonal Mining	1311/4	10	FO
Law Enforcement	1801/11	20	FO
District Manager	0301/14	10	DO
Budget Analyst	0560/11	10	DO
Planning & Environmental Coordinator	0301/12	5	DO
National Conservation Lands Lead	0301/13	10	SO

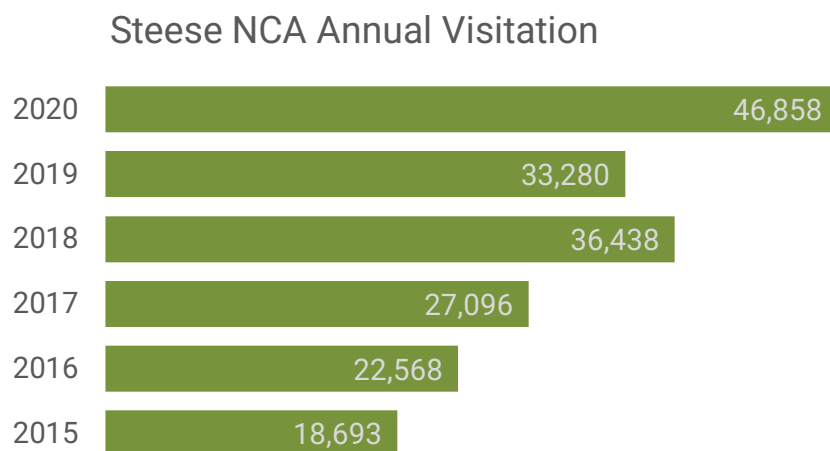
*FO = Eastern Interior Field Office, DO = Fairbanks District Office, SO = Alaska State Office

EIFO filled vacancies in FY20 for Assistant Field Manager for Visitor Services, Assistant Field Manager for Resources and Minerals, Physical Scientist, Geologist, Natural Resources Specialist, Fish Biologist, and Realty Specialist. The Field Manager position is currently vacant.

2 Programs and Accomplishments

General Accomplishments

The Steese NCA had many accomplishments this year, despite challenges presented by COVID-19. In the fall of 2019, employees taught Leave No Trace principles to a high school outdoor education class and made important outreach contacts at a winter trade show. The BLM promoted the NCA's social distancing recreation opportunities and acknowledged important anniversaries for ANILCA, the Steese NCA and the Pinnell Mountain NRT. Visitation increased because of higher levels of in-state tourism (due to outside travel restrictions) and an expanded caribou hunt in the fall. Based on visitation at developed recreation sites, the Steese NCA had an estimated 46,858 visits and 177,519 visitor days in 2020. As can be seen in the figure below, visitation has been steadily increasing in recent years with a dip in 2019, due to visitation diminished by smoke from wildfire activity across the state.



A graph of estimated annual visitation to the Steese NCA, shows increases over six years, from 18,693 visits in 2015 to 36,438 visits in 2018 and 46,858 visits in 2020.

During the summer, detailed risk assessments and safety protocols enabled staff to conduct field work to complete surveys for cultural resources on Birch Creek WSR, collect samples for monitoring caribou forage and diet, maintain river gages, monitor recreation resources and water quality of Birch Creek WSR, inspect mining operations, photograph inventoried travel routes, and maintain clean recreation sites for the public.

Our 2020 accomplishments in specific programs are detailed below.

General Accomplishments Table

	Number of Visitors	Education Participants	Interpretive Participants	Visitor Center/Contact Station Visits	Hours of Volunteers	Caribou Hunter Outreach Contacts	Water Quality Monitoring Sites WSR	Miles of evaluated routes
TOTALS	46,858	32	2,187	N/A	160	91	2	398

Education, Outreach, and Interpretation

The BLM provides maps and information about recreation opportunities Steese NCA, Birch Creek WSR and Pinnell Mountain NRT online and at Steese Highway wayside kiosks, the Fairbanks District Office’s public room, the Alaska Public Lands Information Center operated by the NPS in downtown Fairbanks, ADF&G information desks, and in local communities.

This year, the BLM and its federal partners the U.S. Fish and Wildlife Service and NPS joined State and local partners to develop a multiagency Alaska Public Lands Visitor Center in Tok, Alaska, as authorized by ANILCA. The aim is to expand the theme and scope of an existing local visitor center and collectively provide visitor services under one roof. Joining forces in this way helps each partner to further its interpretive and educational purposes. As the partner agencies move forward, they will create a shared interpretive theme to create a world-class visitor experience at a strategic location for highway travelers visiting Alaska.

Each year, EIFO participates in a variety of community events in Fairbanks. However, many events (school programs, community fairs, and trade show events) were cancelled due to the ongoing pandemic. Based on previous years’ attendance at events, these cancellations resulted in the loss of an estimated 600 education contacts and 2,000 interpretive contacts for the Steese NCA in FY20. When in-person events were no longer possible, EIFO found other ways to help the public to learn about and make connections with the Steese NCA resources.

West Valley High School Leave-No-Trace

EIFO partnered with the Central Yukon Field Office to teach Leave No Trace principles to the Outdoor Education class at West Valley High School. In three sessions throughout the fall semester, 32 students learned the seven principles of Leave No Trace and practiced building fires and making decisions in field lessons.

Winter Expo Trade Show

The annual October event at the Carlson Center had over 120 participating businesses and public attendance of 3,300. At the two-day trade show, the BLM made approximately 850 contacts. Employees provided information about recreation opportunities for visitors of various skill levels and helped people learn how to safely access their public lands.

Earth Week Art and Poetry Walk



This poster celebrating 50 years of the Pinnell Mountain Trail hung at Creamer's Field during the Earth Week Art and Poetry Walk.

During a weeklong celebration of Earth Day's 50th

Anniversary in April, EIFO contributed a poster to an Art and Poetry Walk hosted by the Friends of Creamer's Field. The poster is a watercolor painting created by BLM Artist in Resident Brad DeFrees, who hiked the trail during his residency, and commemorated the 50th Anniversary of the Pinnell Mountain NRT. The Poetry walk included poetry and art submitted by all ages, and it occurred during the spring

return of migratory waterfowl, an event that attracts many spectators to the Creamer's Field Migratory Waterfowl Refuge in Fairbanks; an estimated 1,200 people viewed the poster during the event.

40th Anniversary Social Media Outreach

December 2, 2020 was the 40th anniversary of ANILCA. Beginning in the spring, BLM Alaska celebrated the anniversary with a series of social media posts that brought attention to the special areas created through ANILCA. The Steese NCA and Birch Creek WSR were the subject of a Facebook post in this series, which generated several 'likes' as well as a comment about protecting habitat for caribou herds.

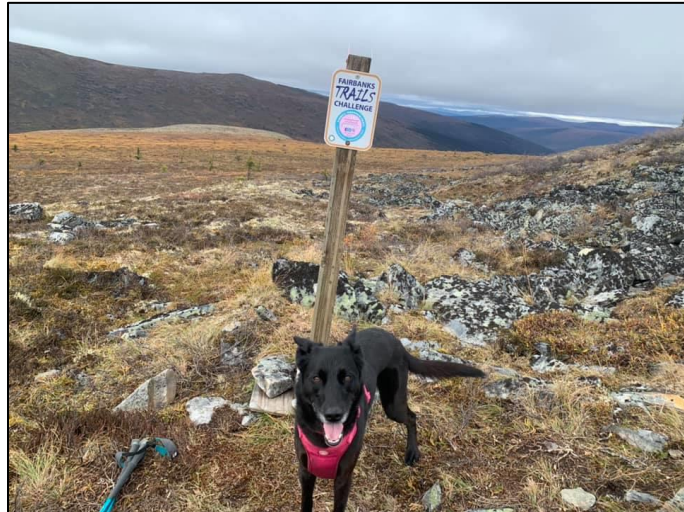
Virtual Luncheon

In April, the Rotary Club of Fairbanks invited staff to give a virtual presentation to

share information about summer outdoor recreation opportunities. In addition to sharing information about the area's rivers and trails to the 45 participants, the presentation highlighted sources of online information and resources such as the Steese NCA Digital Public Information Map.

Fairbanks Trail Challenge – Pinnell Mountain National Recreation Trail

This summer EIFO partnered with the Fairbanks North Star Borough to promote the Pinnell Mountain NRT by including it in the Fairbanks Trail Challenge, an all-ages, all-abilities, outdoor scavenger hunt designed to get friends and family outside, exploring local trails. To participate, hikers shared pictures taken with special trail markers on the twenty trails included in the challenge. The Pinnell Mountain NRT's marker, placed just over a mile from the Twelvemile Summit trailhead, was shared by 92 hikers.



Reaching the Pinnell Mountain NRT marker for the Fairbanks Trail Challenge required walking approximately 1 mile from the Steese Highway.

WSR and NRT Guide Brochures

With BLM public rooms open only by appointment due to the pandemic, EIFO staff worked to ensure the travel guide brochures for Birch Creek WSR and Pinnell Mountain NRT were available online to help visitors plan their visits.

In addition, the *Birch Creek River Guide* was updated. This brochure is the main guide for the wild and scenic river and provides general information about the river as well as information important for trip planning. In addition to posting the guide on BLM websites for downloading, the BLM printed 12,000 copies of this popular brochure for distribution in wayside kiosks and public information centers across the state. Work to update the Pinnell Mountain NRT brochure began this year; a digital update should be ready in FY21.

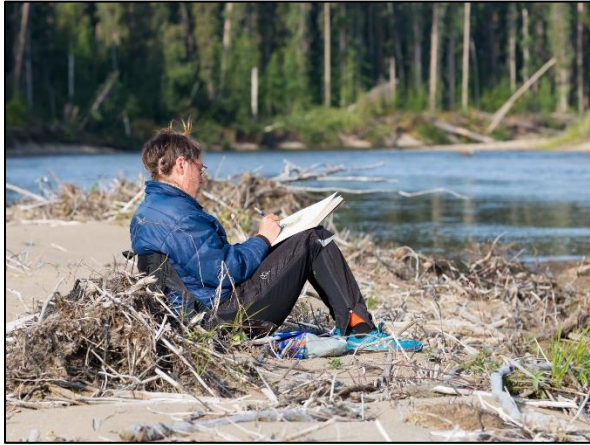
Artist-in-Residence and New BLM Alaska Flickr Album

The BLM's Artist-in-Residence Program allows artists to combine their passions for creativity and the outdoors in a way that helps to inspire others. Artists look closely at the way the world works, notice things that others may have missed, challenge ideas, and provide new ways to look at and appreciate public lands.

Since 2014, BLM Alaska's Artist-in-Residence program has hosted artists during summer and winter residencies. This year BLM staff developed a new Flickr album with scenes and art from residencies across the state to share the experiences this

program has inspired. The pictures include key words that can be used by search engines and are accessible to the public online at

<https://www.flickr.com/photos/blmalaska/albums/72157713989392573>

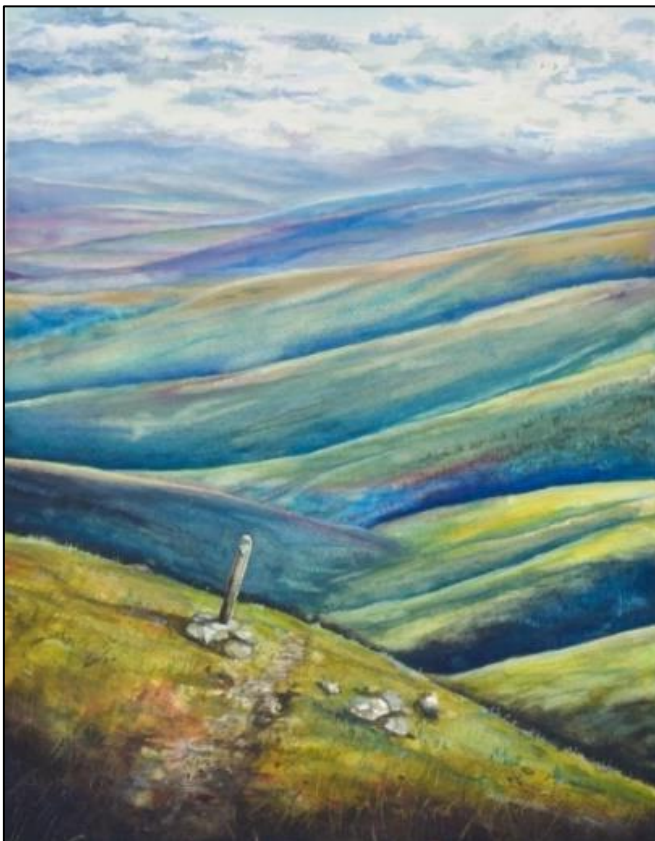


Photographs of artists shared on the BLM Alaska Flickr album for the Artist-in-Residence program: Becca Rorabaugh sketches on a Birch Creek WSR gravel bar (left) and Brad DeFrees hikes on the Pinnell Mountain NRT (right).

The Steese NCA did not host an artist in FY20, but both of the previous Steese NCA artists, Becca Rorabaugh and Brad DeFrees, completed their art submissions this year. Rorabaugh created an oil painting inspired by an eight-day float on Birch Creek WSR in 2018 to commemorate the 50th Anniversary of the Wild and Scenic Rivers Act. DeFrees, the 2019 Pinnell Mountain NRT artist, created a watercolor painting inspired by the weathered trail markers and the endless views of ridges he enjoyed during his hike on the trail. Artists' submissions are used to create posters for free public distribution as part of BLM Alaska's Artist-in-Resident Poster Series.



BLM Artist-in-Residence by Becca Rorabaugh created this oil painting inspired by her art residency on Birch Creek WSR in 2018.



Watercolor painting by Brad DeFrees, inspired by his BLM Artist-in-Residence experience on the Pinnell Mountain NRT in 2019.

Cultural Resources

During the 2020 field season, BLM archaeologists and partners from the University of Alaska Museum of the North in Fairbanks, Alaska, conducted a survey for prehistoric cultural resources in the Birch Creek WSR corridor. During the survey, archaeologists also visited previously known prehistoric sites in the hopes of finding organic material (such as charcoal or bone) suitable for radiocarbon dating. Over 10 days, the archaeologists floated 110 miles via inflatable rafts, tested 31 localities, and dug 55 test pits and test units. These efforts resulted in intensive surveys of 128 acres as well as the discovery of six new prehistoric sites and testing of four known sites. Only two sites produced dateable materials. Submitted radiocarbon samples have returned dates indicating that these sites are late Holocene in age, dating less than 2,000 years old. These results are similar in terms of acres surveyed and number of sites found to other archeological surveys along Birch Creek over the past 15 years.



Museum of the North archaeologist Sam Coffman excavates a test unit at a prehistoric overlook and campsite on Clums Fork, a tributary of Birch Creek WSR.



Small, individual rafts, ideal for navigating shallow waters, provided safe distancing for the archaeologists who surveyed Birch Creek WSR.

Only 1%–2% of the Steese NCA is surveyed for cultural resources, largely due to the inaccessibility of most of the terrain. Proactive surveys for cultural resources on all federal lands is called for by legislation (National Historic Preservation Act of 1966, as amended). This information is critical when evaluating permitted actions and other authorizations on federal lands such as Special Recreation

Permits (SRPs) and planning efforts including the Travel Management Plan and other step-down plans. Surveys prioritize those areas that receive the highest visitation and use rates, such as the Birch Creek WSR and overland OHV trails used by recreators and hunters.

Wildlife Resources

Fortymile Caribou Herd

EIFO continued work as a primary partner, with the ADF&G and the Yukon Department of Environment (Environment Yukon), in managing Fortymile Caribou Herd harvest and in inventorying and monitoring the herd and its habitats. The NPS also contributed to this partnership. For more information about partnership work refer to [Chapter 3: "Science, Fortymile Caribou Herd Habitat."](#)

Long-term growth of the herd and resulting changes in movement patterns resulted in high numbers of caribou (and hunters) along the Steese Highway in the past several years. ADF&G data on pregnancy rates and body weights indicate a long-term decline in nutritional condition, possibly indicating that carrying capacity of habitat has been reached or exceeded. The herd is not yet using some portions of its historic range, and nutritional condition may stabilize or improve if it does. Herd managers hope that an ongoing habitat relationships study, along with long-term interagency monitoring, will provide insight into the quality of used and unused historical habitat.



Bull caribou of the Fortymile herd browsing on willow.

Tracking the Herd

In 2020, ADF&G biologists deployed 25 BLM-supplied GPS radio-collars on female Fortymile caribou. The BLM contributed these collars to support interagency monitoring of the herd, including seasonal and annual herd distribution and movements. Movement and distribution data informs in-season harvest management decisions and our understanding of crucial habitats and caribou responses to disturbance. This information is also important for planning efforts such as the Travel Management Plan and the Recreation Activity Management Plan as well as decisions such as issuance of hunting guide permits.



Alaska Department of Fish and Game biologist outfitting a female caribou with a GPS radio collar to support interagency monitoring of the Fortymile Caribou Herd.

Animal Condition Monitoring

For a fourth year of monitoring, BLM and ADF&G biologists contacted hunters to obtain tissue samples and measurements from harvested caribou to document and monitor the herd's nutritional condition, which also provides an indication of range condition.

Caribou Forage Quality Monitoring

BLM biologists collected samples of caribou forages in both early and late summer at Eagle Summit to begin a long-term monitoring effort. Variations in forage quality through time may be a primary driver of caribou condition.

Caribou Diet Monitoring

EIFO and ADF&G biologists collected fecal samples during other field work and when

caribou occurred near roads for continued monitoring of diet as caribou density in the Steese NCA increases. EIFO and Yukon Department of Environment are currently evaluating DNA metabarcoding analysis of fecal samples as an alternative to microscopic identification of plant fragments. Identifying key forages and quality will aid in designing habitat monitoring and identifying crucial habitats.

Watchable Wildlife

Wildlife staff across BLM Alaska worked to create a new *Watchable Wildlife* guide for visitors to Alaska's public lands. The Steese NCA is highlighted as a place to see the Fortymile Caribou Herd and alpine species such as Dall sheep, gyrfalcons, northern wheatear, and pika due to the area's unique habitats.

Steese & White Mountains

View a slice of interior Alaska by visiting the 2.2 million acres of BLM-managed public lands that stretch from Fairbanks to the Yukon River at Circle City. Hike, bike, ski, snowmachine, paddle, or drive through the spruce and birch forests and mountain summits of Steese National Conservation Area and White Mountains National Recreation Area. The region's low, rounded mountain ranges and clear-water river valleys provide important habitat for the Fortymile caribou herd and many other species.

Habitats Alpine tundra | Boreal forest | Shrubland | Riverine/riparian | Freshwater lakes/ponds

Species to See

Dall sheep - These bright white herbivores roam the Steese and White Mountains searching for food. Ewes (females) and rams (males) look similar with short, slightly curved horns until the age of three years. However, rams' horns continue to grow each year, becoming massive and curled. Remember to give Dall sheep plenty of space if you are lucky enough to see them.

Northern wheatear - The northern wheatear has the longest east to west migration of any bird, flying across Asia to wintering grounds in Africa. They spend summers nesting and raising chicks in the rocky tundra of interior Alaska. Look for their distinct black-and-white tail pattern to identify this bird.

Gyrfalcon - The largest falcon in the world can be seen hunting other birds in the tundra. It is estimated that a breeding pair of gyrfalcons and their chicks require two to three pounds of food per day. This is equal to the whole family sharing about two to three ptarmigan each day.

Collared pika - The quick-moving, skittish pika is closely related to rabbits. They spend the summer darting around the alpine tundra, collecting vegetation they dry into hay for the winter months. These independent creatures do not hibernate and must rely on their hay pile to feed them under the snow all winter. Sometimes they steal from their neighbors to increase the size of their hay pile.

Wildlife Viewing Tips
The Steese Highway is unpaved after milepost 80.

Other Resources
[Steese and Elliott Highway Travel Guide](#) | [Birch Creek Wild and Scenic River Guide](#) | [Beaver Creek Wild and Scenic River Guide](#) | [Steese National Conservation Area Digital Public Information Map](#) | [White Mountains National Recreation Area Digital Public Information Map](#)

Landscapes Shaped by Fire
Wildland fires are common throughout interior Alaska, creating a mosaic of burned and unburned land. The boreal forest has adapted, and even comes to depend, on fire. Black spruce trees have semi-serotinous cones, meaning they benefit from fire to open the cones and release seeds. Other vegetation pops up quickly after a fire, attracting small mammals that eat the various herbs and wildflowers. In turn, these animals attract predators. Along the Steese Highway, you can see many areas still recovering from the 2004 Boundary Fire.

Wildlife Viewing Sites

- Wickersham Dome & Summit Trail (Elliott Highway MP 27)** - Climb through the white spruce into alpine areas where marmots whistle from the rocky outcrops.
- Chatanika River** - This river parallels the Highway and contains a series of old mine tailing ponds which draw moose and waterfowl. Fish, such as king (Chinook) salmon, northern pike, least cisco, whitefish, and burbot, swim in the river and attract bears, wolves, and scavenging birds.
- Cripple Creek Campground (SHW MP 60)** - The short nature trail to the Chatanika River provides opportunity to spot northern waterthrush and various flycatchers and warblers. The sounds of Swanson's and varied thrush fill the air. Otters and ermine may be seen along the river.
- Mount Prindle & Quartz Creek Trail** - The high peaks, rocky ridges, and glaciated valleys of this area provide ideal habitat for Dall sheep. Bird species such as white-crowned sparrow, hermit thrush, and Wilson's warbler nest in shrubby tundra for the landscape.
- Twelvemile Summit (Steese Highway (SHW) MP 85) and Eagle Summit (SHW MP 107)** - Caribou from the Fortymile herd may be seen from the highway or by scanning the alpine tundra during a hike. Caribou feed upon the dense carpets of lichens. These points mark the ends of the Pinnel Mountain National Recreation Trail.
- Pinnel Mountain National Recreation Trail** - Look for gyrfalcon and ptarmigan along this 27-mile trail. Listen for the whistles of marmots and high-pitched pika chirps. Enjoy the breeding calls and displays of the northern wheatear, Lapland longspur, surfbirds, and American golden plovers.
- Beaver Creek & Birch Creek National Wild & Scenic Rivers** - A summer float trip down either of these creeks may reward visitors with sightings of beaver, river otter, moose, caribou, black bear, brown bear, and wolves. Watch for the aerial acrobatics of peregrine falcons hunting.

Other Notable Locations

- Yukon Flats National Wildlife Refuge, U.S. Fish and Wildlife Service: Alaska's largest boreal wetland basin is essential breeding habitat for millions of waterfowl.
- Lower Chatanika River State Recreation Area, Alaska Department of Natural Resources: Hike, berry pick, or camp around Otter Pond, and watch for the moose that frequent the area.
- Yukon River, multiple land managers: The bluffs, oxbow, and expansive riparian habitat of the Yukon River attract bald eagles, peregrine falcons, and moose.

BLM Eastern Interior Field Office | 222 University Ave., Fairbanks, AK 99709 | 907-474-2200 or 1-800-437-7021

BLM's new *Watchable Wildlife* field guide for Alaska. The guide includes includes habitat maps and tips for viewing in the Steese NCA.

The field guide provides information about habitats and wildlife in Alaska and highlights BLM sites that provide opportunities for watching wildlife. As the year ends, the BLM is finalizing the guide and ordering 8,000 copies to be distributed in districts throughout the state with 1,200 for the Fairbanks District.

Birch Creek Raptors

Resources staff joined the annual monitoring float on Birch Creek WSR to record information on nesting raptors visible from the river corridor. This survey recorded 17

peregrine falcons, including four active eyries, as well as eight Harlan's red-tailed hawks, six bald eagles, five osprey, and four great horned owls. These observations contribute to long-term monitoring, especially of peregrine falcons and bald eagles, which are important Watchable Wildlife species and listed as priority raptor species in the Steese RMP. Long-term monitoring can be used to determine the need for any measures to minimize impacts from activities.

Data Management

The wildlife program worked with a University of Montana GIS technician to compile long-term wildlife datasets (including those of moose, caribou, Dall sheep, raptors, and vegetation monitoring plots) for analysis that will inform current and future management decisions related to wildlife mitigation measures, fire management, subsistence management, and step-down plans such as the Travel Management Plan.

Aquatic Resources

Birch Creek WSR Water Quality Monitoring

In 1980 Congress designated the Steese NCA in ANILCA, directing the BLM to consider the special values of caribou range and Birch Creek. Approximately 77 miles of Birch Creek WSR flows through the Steese NCA. BLM Manual 6400 – *Wild and Scenic Rivers – Policy and Program Direction for Identification, Evaluation, Planning, and Management* (7/13/2012) directs the BLM to work cooperatively with the USGS and State water quality agencies in addressing water quality concerns in WSRs.

For more information about the status of Birch Creek water quality see [Chapter 4: "Resources, Objects, Values and Stressors, Birch Creek Wild and Scenic River Water Quality."](#)

Automated Water Quality Monitoring Stations

This year, hydrologists deployed automated multiparameter water quality meters at two stream gage stations accessible from the Steese Highway at WSR mile 0 and WSR mile 126. The meters operated 113 days, June 10 through September 30, recording water temperature, pH, and turbidity (NTU) at 15-minute intervals. Daily water quality values for the 113-day sample period are summarized below.

Upper Birch Creek Stream Gage

The BLM continued monitoring stream flow, climate conditions, and water quality in 2020 at the WSR Mile 0 gage site near Upper Birch Creek Wayside, mile 94 Steese Highway. Upper Birch Creek is a moderate gradient, clear-water stream. Stream banks and bed material are dominantly cobble, gravel, and sand. Gage records provide documentation of water quality and stream flow for instream-flow water reservation applications as well as supporting



Location of the BLM stream gage on upper Birch Creek WSR at the BLM wayside at Steese Highway MP94 (WSR Mile 0).

recreational float boating for hunting, fishing, and wildlife viewing. Stream gage data is available on the National Weather Service website:

<http://www.nws.noaa.gov/oh/hads/>, NESDIS ID = 32B3986C, NWSLI ID= BCTA2.

Lower Birch Creek Steam Gage

In 2020, the BLM established a new five-year interagency agreement to work cooperatively with USGS to install, operate, and maintain a stream gage on lower Birch Creek, at WSR Mile 126, near the Steese Highway Birch Creek bridge at mile 147 Steese Highway. Lower Birch Creek is a low-gradient, highly sinuous stream. Stream banks are dominantly sand and silt. Gage operations began in June 2020, supporting instream-flow water reservations and recreational float boating for hunting, fishing, and wildlife viewing. Data are available to the public at the USGS web site:



Location of the USGS stream gage on lower Birch Creek WSR at the Steese Highway MP147 bridge crossing (WSR Mile 126).

https://waterdata.usgs.gov/ak/nwis/uv/?site_no=15446000&PARAMeter_cd=00065,00060

Preliminary results of 2020 water quality monitoring are in review but tend to show periodic elevated turbidity levels particularly at the lower Birch Creek monitoring site (WSR Mile 126). The BLM is working with state and federal agencies to better identify

source areas contributing to periodic increases in turbidity and to develop mitigation strategies for reducing erosion from identified source areas. More frequent wildfires, surface disturbance from past placer-mining activity, as well as soil instability and erosion associated with thawing permafrost likely contribute to intermittent elevated turbidity levels in the watershed. More information about these stressors to Birch Creek water quality may be found in [Chapter 4: “Resources, Objects, Values and Stressors, Birch Creek Wild and Scenic River Water Quality.”](#)

Water Quality of Birch Creek Tributaries

In July, hydrology staff joined the recreation staff’s Birch Creek WSR trip, measuring water quality parameters of temperature, pH, and turbidity on seven of the WSR’s major tributaries. Hydrologists also measured water quality parameters at the upstream extent (WSR Mile 0) and the downstream extent (WSR mile 126) of Birch Creek WSR. Water levels at the Upper Birch Creek gage site were relatively low, approximately 1.2 feet at the start of the float trip. Levels increased moderately from rain events as the trip progressed downstream.



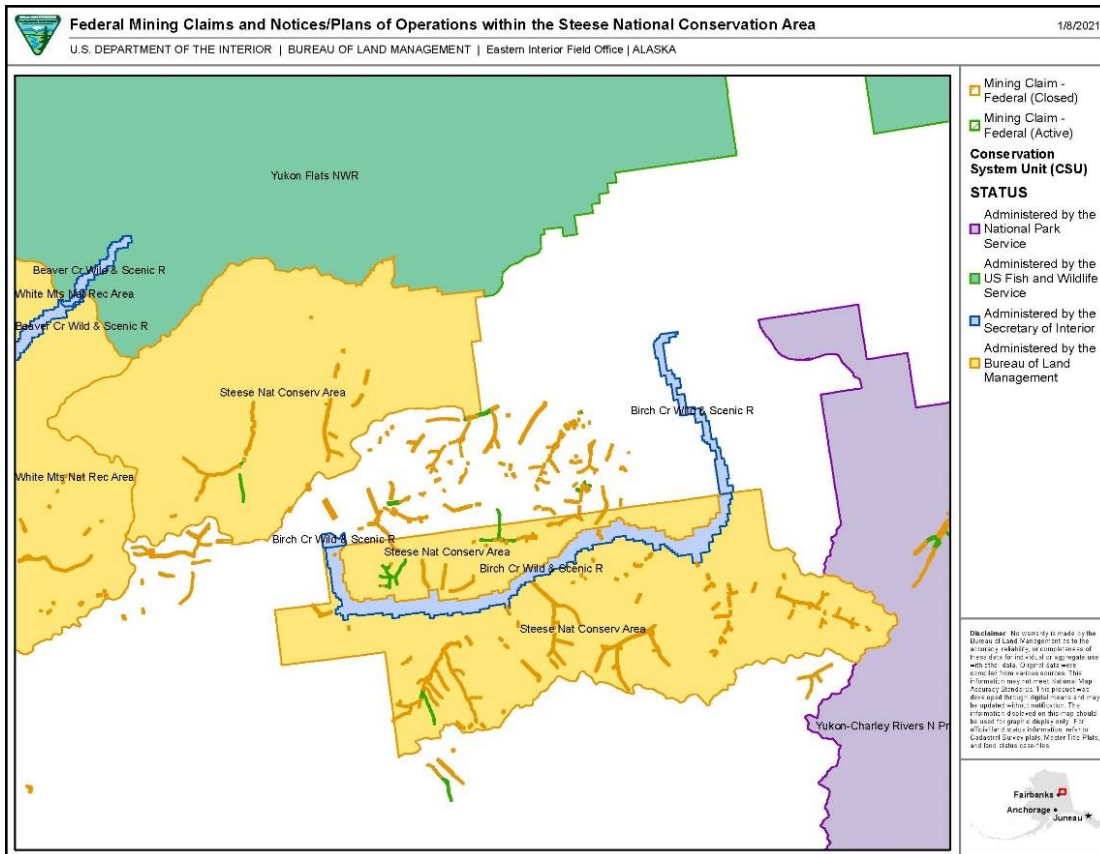
Recreation and resources staff worked together to collect equal-width increment water quality measurements in Birch Creek WSR.

Measured water temperatures, pH, and turbidity levels for all seven major tributaries were within Alaska Department of Environmental Conservation (ADEC) drinking-water standards except for South Fork of Birch Creek, where turbidity levels

were slightly elevated (6.6 NTU). The ADEC drinking-water standard for turbidity is “May not exceed 5 nephelometric turbidity units (NTU) above natural conditions when the natural turbidity is 50 NTU or less...” The ADEC turbidity standard for Growth and Propagation of Fish, Shellfish, Other Aquatic Life, and Wildlife is “May not exceed 25 NTU above natural conditions.”

Locatable and Mineral Materials

Placer mining for gold has occurred in the area that is now the Steese NCA since the late 1800s. Most mining claims are inactive or were closed long ago, but seven placer mines remain active in the Steese NCA. The mines are in remote areas accessible via aircraft or long, challenging OHV routes. The BLM inspects active mine sites regularly and works with operators to assure compliance with their authorizations and mine reclamation plans.



Map of the Steese NCA with active federal mining claims shown in green and claims that have been closed shown in gold.

In 2020, EIFO mining compliance specialists were able to safely conduct two rounds of aerial inspections of all placer mines within the Steese NCA. One round of inspections occurred in March and one in September. No mining operations were active during these periods and no violations were found.

Seven mines within the NCA have current plans of operation. EIFO continues to work with the claim owners to address reclamation, hazardous materials and removing abandoned equipment and structures. Some operations have claimant responsiveness and ownership challenges making it difficult to address issues. Over the coming season EIFO staff will continue to work with operators and claimants to develop solutions.

The BLM continues to monitor reclamation activities and uses adaptive management to achieve compliance with reclamation standards and develop mitigation and reclamation techniques that will reduce short- and long-term impacts of surface-disturbing activities to fish and aquatic resources.



This placer mine on Fryingpan Creek is located on one of several blocks of active mining claims located within the Steese NCA. BLM mining compliance staff routinely monitor such sites for signs of environmental degradation and to assess needs for removal of solid or hazardous waste.

Partnerships

Birch Creek WSR Archaeology Survey

BLM archaeologist Robin Mills partnered with archaeologists with the University of Alaska Museum of the North, in Fairbanks, to conduct a survey for prehistoric cultural resources in the Birch Creek WSR. Results of that survey are provided above. (See [Chapter 2: “Programs and Accomplishments, Cultural Resources.”](#))

Birch Creek Water Quality Monitoring Partnerships

EIFO works closely with the USGS Water Resource Division, the NWS River Forecast Center, and ADEC to inventory stream flow and monitor water quality and meteorological conditions for Birch Creek WSR. These collaborative working relationships benefit all cooperating agencies through data sharing and coordinated field logistics, significantly reducing individual agency costs for field travel and equipment. For example, the NWS assists the BLM with stream gage operations at Birch Creek WSR Mile 0. This gage provides recreational users and local subsistence users with real-time water level information for planning river travel.

For more details see [Chapter 2: “Programs and Accomplishments, Aquatics Resources, Birch Creek WSR Water Quality Monitoring”](#) and [Chapter 4: “Resources, Objects, Values and Stressors, Birch Creek Wild and Scenic River Water Quality.”](#)

Fortymile Caribou Herd Management Partnership

The Fortymile Caribou Herd is the most important caribou subsistence resource in eastern Interior Alaska and is the primary herd within the Steese NCA. Close coordination with ADF&G, NPS, ANILCA-mandated Subsistence Regional Advisory Councils, and the Federal Subsistence Board (in the form of setting regulations) is required to manage the harvest, herd, and the herd range. BLM biologists have forged a partnership with ADF&G to conduct population, distribution, harvest, and habitat monitoring. This relationship is guided by Memorandums of Understanding between ADF&G, BLM, and the Federal Subsistence Board. The partnership is supported by expenditures by each agency, as well as the Yukon territorial government. BLM provides funding through a Cooperative Agreement that has contributed to the success of the long-term recovery of the herd and now management during a decline.

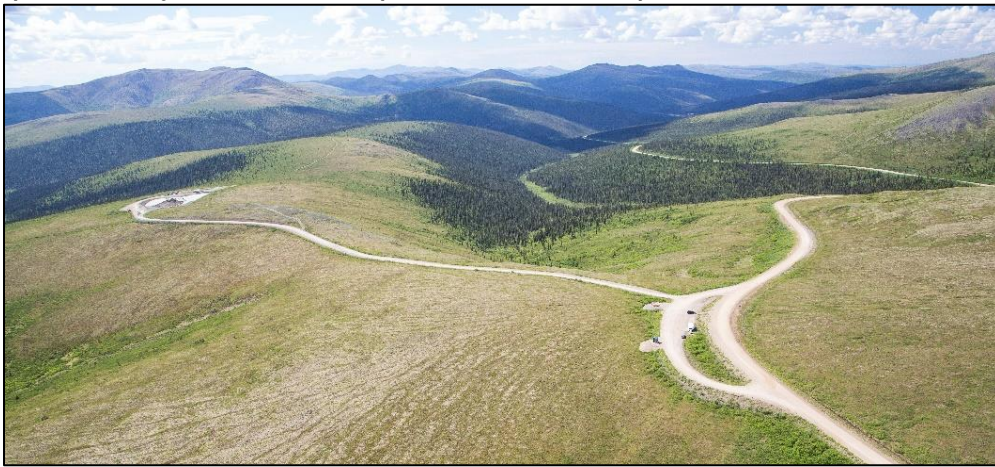
This year EIFO worked with these and other partners (including the University of Montana, Northern Arizona University, and Salcha-Delta Soil and Water Conservation District) to gain a better understanding of critical habitat components and how they may respond to increasing caribou populations. This information will help managers to optimize caribou population and habitat management.

For more details about caribou research, refer to [Chapter 3: “Science, Fortymile Caribou Herd Habitat.”](#) For an update on the status of this important resource, see [Chapter 4 “Resources, Objects, Values and Stressors, Caribou Range.”](#)

Recreation and Visitor Services

Visitor Use

The Steese NCA is remote, offering challenging recreation experiences and few developed sites. The Steese Highway, a State Scenic Byway, runs between the North Unit and the South Unit of the Steese NCA on its way to the Yukon River and the small communities of Central and Circle. The highway provides vistas of the Steese NCA and opportunities for wildlife viewing. During snow-free months, the BLM maintains five Steese Highway waysides that attract large numbers of travelers and provide information, facilities, and parking for visitors venturing on the NCA's main attractions: Birch Creek WSR and Pinnell Mountain NRT. With reduced visitor use during winter months, only Twelvemile Summit Wayside is maintained year-round with snow clearing provided by the Alaska Department of Transportation and Public Facilities.



The Steese Highway and Twelvemile Summit Wayside provide access to remote parts of Alaska.

The remoteness of the Steese NCA contributes to the challenges of monitoring use. The BLM estimated this year's use numbers from baseline visitation established previously for the Steese NCA and trends tracked at the neighboring White Mountains NRA. Baseline visitation is based on comprehensive observations of wayside traffic and trail counters for monitoring use of the Pinnell Mountain NRT and aerial counts of summer visitors on Birch Creek WSR.

Despite COVID-19 interstate travel limitations, Steese NCA visitation increased in 2020 with an estimated 46,858 visits and 177,519 visitor days. Many Steese NCA visitors stay on the highway and enjoy the scenery from waysides during short visits. Others use the waysides to access the NCA's undeveloped areas, where visitors generally stay a few days to a week. The increased visitation this year was due to higher in-state tourism, an expanded Fortymile caribou hunt in August, and continued local use, including by Fairbanks-area residents.

The Steese NCA is a popular destination for federally qualified subsistence hunters and other hunters seeking caribou, moose, sheep, bear, gamebirds, and waterfowl. Winter hunting and trapping are also common activities throughout the Steese NCA. The NCA sees its highest levels of visitation during the fall big-game hunts that attract hunters from many parts of the state and from around the world. Current hunter registration and reporting requirements do not provide sufficient information to accurately estimate the proportion of hunters who are federally qualified subsistence hunters.

Visitation for the BLM’s Steese Highway waysides, collected in the agency’s Recreation Management Information System, is summarized in the table below:

Steese Highway BLM Waysides	Number of Visits
Twelvemile Summit Wayside – NRT trailhead	13,817
Eagle Summit Wayside – NRT trailhead	9,209
Upper Birch Creek Wayside – WSR put-in	9,135
Lower Birch Creek Wayside – WSR take-out	2,431
Birch Creek Bridge – motorboat launch	379

Birch Creek Wild and Scenic River

Birch Creek WSR is one of the few Alaska rivers that can be reached by road but still offers a remote experience as the river quickly leaves the Steese Highway to enter the Steese NCA’s South Unit. Summer waysides attract Steese Highway travelers on their way to Central or Circle but primarily serve to provide parking and facilities for float boaters. The more remote parts of the river attract visitors year-round with an estimated 1,612 visits in 2020.

During the summer, floating the 110 river miles between the put-in at the Upper Birch Creek Wayside and the take-out at the Lower Birch Creek Wayside typically takes a week and is a popular way to visit the Steese NCA. On the remote parts of the river, visitation is sparse with only one or two parties floating each week. Peak use for floating is during spring high water and during fall caribou and moose hunts. To aid with trip-planning, visitors can monitor water levels online from satellite-linked river gages maintained by the hydrology program in cooperation with the USGS. For more information about the Birch Creek river gages



A hydrology seasonal technician navigates Double Barrel Rapid on Birch Creek WSR during the monitoring float in July.

refer to [Chapter 2: “Programs and Accomplishments, Aquatic Resources, Birch Creek WSR Water Quality Monitoring.”](#)

In the winter, Birch Creek is enjoyed by snowmobilers, mushers, trappers, and hunters. In February, the Yukon Quest International Sled Dog Race follows Birch Creek on its way between Fairbanks, Alaska and Whitehorse, Yukon, Canada. Both Birch Creek waysides provide excellent opportunities for watching the competing mushers.

For annual WSR monitoring in July, recreation staff joined resources staff to conduct hydrology and raptor surveys. During the 8-day, 110-mile float, the team removed approximately 40 pounds of debris from the WSR corridor such as broken guitars, rain gear, camp food and broken plastic buckets. During the July float, staff also documented seven upland camps that are important to floaters during highwater events.

For more information about the hydrology surveys refer to [Chapter 2: “Programs and Accomplishments, Aquatic Resources.”](#) For more information about the raptor surveys, refer to [Chapter 2: “Programs and Accomplishments, Wildlife Resources.”](#)

The Pinnell Mountain National Recreation Trail

Following the southern boundary of the Steese NCA’s North Unit, the 27-mile non-motorized Pinnell Mountain NRT traverses alpine ridges entirely above tree line. The trail was nominated as a component of the National Trails System in 1971 and is one

of the few maintained primitive hiking trails in interior Alaska. The BLM manages the NRT for a primitive experience, where users feel isolated from the sights and sounds of man, encounter a high degree of risk and challenge, and use outdoor skills.

Along the Steese Highway, two BLM waysides provide access to the NRT: Eagle Summit Wayside and Twelvemile Summit Wayside. Each wayside includes parking, outhouses, and visitor information and interpretation panels. Situated 10 miles from each trailhead, the trail's two emergency trail shelters provide protection from the alpine weather and include cisterns for water. In 2020, based on wayside visits and hiker registration, estimated trail use included 4,189 day-hikers and 663 through-hikers.



The switchbacks of the Pinnell Mountain NRT climb up the ridge near Eagle Summit, the highest point on the Steese Highway.

Special Recreation Permits

For 2020, the BLM authorized and monitored ten SRPs for activities in the Steese NCA. These included guided big game hunting, guided trips on Birch Creek WSR and the Pinnell Mountain NRT, day-hiking tours, dogsled and snowmobile tours, and transportation and outfitting services. Only two permits were active in FY20: a competitive event and a hunting guide.

In February, the permitted 1,000-mile sled dog race, the Yukon Quest, drew hundreds of spectators to the area. The course runs between Fairbanks, Alaska and Whitehorse, Yukon, with start locations alternating each year. This year, the race started in Fairbanks with 15 mushers competing. An additional 21 mushers participated in a 300-mile race that follows the Yukon Quest trail to the Yukon River and ends in Central, Alaska. The course for both races ran over high passes of the Steese NCA and along Birch Creek WSR. Checkpoints along the course provide rest, safety, and welfare checks for dogs and mushers. BLM sites along the Steese Highway and in Central, Alaska, are important for the success of the event and the safety of the competitors.

The permitted hunting guide conducted two separate week-long hunts in the South Unit of the NCA: one in Harrison Creek and another that included floating Birch Creek WSR. Both guided trips were in pursuit of predators including bears and wolves, but no animals were taken.

Visitor Use Impacts

Over the last few years, visitor use management has been adjusting to changes associated with the Fortymile caribou hunt. Beginning in 2017, the fall migration brings the herd into the North Unit of the Steese NCA. Thousands of caribou now cross the Steese Highway during the federal subsistence and state caribou hunts, attracting hunters across the state. In addition, the harvest quota has been increasing in recent years as the herd has grown. With a larger quota, the hunt is open longer and more people participate.

This August, the Steese NCA hosted thousands of hunters for the largest Fortymile caribou hunt in recent years, with over 9,000 registered permit holders. In the Steese area, ADF&G estimates 1,200 caribou were harvested on the first day, with 4,000 caribou harvested in just a few weeks before the hunt closed. As mentioned above, the BLM does not have accurate information to distinguish the proportion of hunters that are federally qualified subsistence hunters. However, observations during time periods open only to federally qualified subsistence hunters suggest a relatively small proportion.



Vehicles with off-highway vehicle trailers line the access road to the Eagle Summit Wayside during the opening day of the Fortymile caribou hunt. Wildlife biologists in safety vests walk to the wayside to contact successful hunters and obtain biological samples.

Many hunters rely on OHVs to access hunting sites. With much of the Steese NCA and surrounding State lands open to cross-country use of OHVs, the BLM has seen the proliferation of user-generated trails along the Steese Highway in recent years. Dry, rocky ridgelines are generally resilient to OHV travel, but in some places repeated travel over sensitive areas has damaged permafrost soils and created challenges for trail users. In preparation for the caribou hunt this year, EIFO staff expanded the placement of maps and information at BLM waysides and main OHV access points to inform hunters about the Steese NCA boundaries and cross-country OHV use limitations that restrict side-by-sides (Utility Terrain Vehicles) and other heavy OHVs.

As mentioned above, in Chapter 1: “Steese Overview, Current Areas of Focus, OHV Impacts to the Pinnell Mountain National Recreation Trail,” the field office gave additional attention to the trailheads for the non-motorized Pinnell Mountain NRT, after OHV use damaged the hiking trail at Twelvemile Summit Wayside and Eagle Summit Wayside during the previous year’s caribou hunt. Cross-country OHV travel is permitted on State and BLM-managed public lands outside the 100-ft NRT corridor, and preparations for the hunt were designed to educate hunters about these differing regulations. Temporary fencing with directional signage was erected to direct hunters to where they could legally use OHVs outside the 100-ft trail corridor.



Information board and temporary fencing placed at the Pinnell Mountain NRT trailhead at Eagle Summit Wayside used to direct OHV traffic away from the trail's 100-ft non-motorized right-of-way.

The temporary fencing was installed before the hunt this year, and it helped prevent additional damage to the impacted trailheads from 2019. However, due to this year's large hunt, BLM waysides quickly filled, and most hunters established camps along the highway where there was no information about the trail. From the Steese Highway, hunters on OHVs created a new track that joins and follows the trail nearly a mile from the highway. The use caused damage to over a mile of the hiking trail on the ridge above the Eagle Summit Wayside.



A section of trail-hardening geoblock on the Pinnell Mountain NRT covered in mud after off-highway vehicles severely impacted over a mile of the non-motorized hiking trail near Eagle Summit.

Rehabilitation is needed to repair this section of the trail and restore the vegetation. The foot path needs to be raised and hardened, and areas with deep rutting and erosion need to be stabilized and revegetated. The BLM is working with the Alaska

Department of Natural Resources, ADF&G, and local user groups to work out a long-term solution for rehabilitating the trail.

Pinnell Mountain NRT Restoration

In the spring, recreation and wildlife staff worked to repair a section of tundra at the Twelvemile Summit trailhead that was damaged in 2019 by OHV traffic. To repair the site, staff raked down ruts, placed water bars, and spread a native seed mix to aid the vegetation restoration and prevent erosion. The BLM placed signs to prevent trampling and inform visitors of the ongoing restoration effort. Signs were placed with attention to size and prominence in effort to maintain an appropriate scenic and recreational experience on the trail while still providing important information to help with resource protection.



Boardwalk of the Pinnell Mountain NRT climbs toward the ridge at Twelvemile Summit Wayside. The OHV track undergoing restoration runs up the slope to the left of the trail. The small sign is placed to prevent trampling and inform hikers of the ongoing restoration.



The first year of restoration of an OHV track in the non-motorized right-of-way for the Pinnell Mountain NRT near the trailhead at Twelvemile Summit Wayside. Left photo was taken on May 28, 2020 prior to seeding. Right photo was taken on August 26, 2020, after a season of growth.

Volunteers

Eagle Scout Project

As part of the requirements for becoming an Eagle Scout, Louis Wood led a crew of volunteers to install new site identification signs at the Steese NCA's four waysides. The volunteer crew, including two adults and six youth, completed the project in a weekend and contributed 160 volunteer labor hours. The bulk of the work was building and installing the base for the new sign at the Lower Birch Creek Wayside (shown in picture). The new signs meet BLM sign standards for National Landscape Conservation System sites and include colorful, custom banners for the Steese NCA and Birch Creek WSR.



Eagle Scout candidate Louis Wood organized volunteers to put up new site identification signs at the Steese NCA's waysides.

Public Access



The Steese Highway and Upper Birch Creek Wayside provide access to remote parts of Alaska.

The remote North and South Units of the Steese NCA are separated by State lands. Dividing the two units, the unpaved Steese Highway (AK Route 6) connects the rural communities of Circle and Central to Alaska's second largest city, Fairbanks. Along

the highway, five BLM waysides provide access to Birch Creek WSR and the Pinnell Trail NRT, the Steese NCA's primary recreation features. From the Steese Highway, a few OHV routes and primitive roads lead into the Steese NCA to provide access for recreation, mining, hunting, and subsistence activities. These primitive roads are unmaintained, and most are suitable only for high-clearance, four-wheel-drive vehicles or OHVs.

Currently, under the Interim Travel Management Plan established in the 2016 RMP, EIFO manages only a few routes in the Steese NCA, which is open for cross-country use of OHVs up to 1,000 pounds curb weight and 50-inch width. The following areas are only open to cross-country travel in the winter, when frozen ground and snow protect important and fragile habitat: Birch Creek WSR, Research Natural Areas, and a Primitive Area near the western boundary of the North Unit. Many Utility Terrain Vehicles, a larger type of OHV, exceed the size limitations for cross-country travel but are often utilized on two primitive roads, Fryingpan Creek Road and Harrison-Portage Creek Road.



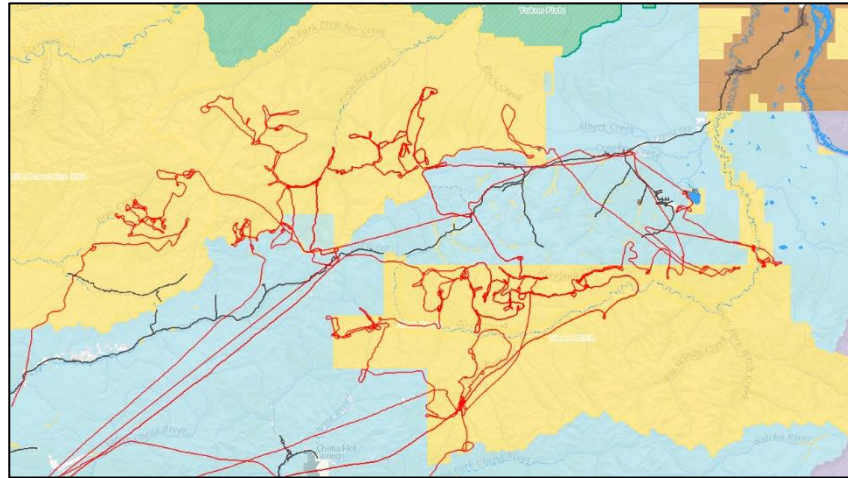
A rider on an OHV stops to watch a small group of caribou cross the Fryingpan Creek Road.

Within areas managed for cross-country travel, visitors have created numerous OHV routes in higher use areas. BLM inventories show nearly 400 miles of summer and winter routes in the Steese NCA. Boundaries for the Steese NCA and Birch Creek WSR are marked along only a few of the main access routes.

Comprehensive Travel and Transportation Management Plan

BLM staff continued work with environmental planning services contractor Logan Simpson LLC to create a Comprehensive Travel and Transportation Management Plan (TMP) for the Steese NCA that will identify and improve trail access while minimizing ORV impacts. This year, the planning team finalized the evaluation of routes used for hunting, trapping, recreation, mining, and subsistence.

During the summer, EIFO recreation and wildlife staff coordinated flights to inventory and evaluate routes, as well as to document current trail conditions using photography and video. Staff took tens of thousands of georeferenced photos for current and future reference. This information has been instrumental for identifying routes



Map showing the red lines of helicopter flight paths from three days of flying to inform the route evaluation for the Steese NCA's Travel Management Plan and to document route conditions and use for future management.

important for access and recreation in the NCA. The photos help to verify route use and document areas sensitive to motorized travel. Some routes in the inventory proved to be unused and difficult to find, such as old mining-related winter routes (used for moving heavy equipment) and routes digitized from satellite imagery.

The ID team is now focused on developing a range of alternatives to complete an Environmental Assessment for the TMP during the winter of 2020-2021.



Many routes, such as this user-made trail above Harrison Creek, provide scenic views and access to sites for hunting caribou.



Helicopter flights helped to determine use of routes. Some features that had originally been identified using satellite imagery turned out to be heavily used game trails.



During the helicopter flights the BLM documented signs of instability attributed to motorized use and route development. Slope failures (left) and ponding (right) are associated with permafrost-rich soils.



This user-generated route for small OHVs illustrates the contrast between routes that form on durable, rocky ground (visible in the right half of this photo) and routes that form on wet areas sensitive to braided trail development (visible in the left half of this photo).

Harrison Creek Right-of-Way

As part of a settlement with the State of Alaska in November 2000, EIFO is preparing an authorization for a perpetual right-of-way to the State of Alaska. The 60-foot right-of-way will generally follow a well-established route along Harrison Creek and Portage Creek in the South Unit of the Steese NCA.

Navigability

On August 24, 2018, the State of Alaska provided notice to the BLM of its intent to file a quiet title action to the submerged lands of Birch Creek WSR, designated by the BLM as non-navigable waters. The State of Alaska is asserting that title to these lands passed to Alaska at statehood based on the equal footing doctrine, the Submerged Lands Act, and the Alaska Statehood Act. A similar case, previously filed by the State of Alaska for portions of the Fortymile WSR (located on public lands also managed by EIFO) is currently in the judicial system with the Department of Justice. All 2020 court dates were postponed due to COVID-19 pandemic. Judicial navigability findings from the Fortymile WSR case, expected in July 2021, will likely set precedence in the court system and could have impacts for future management of rivers on federally administered lands in Alaska.

Other Program Topics

Wildland Fire

No fire starts were detected in 2020 within the Steese NCA.

EIFO initiated work on a Programmatic Environmental Assessment for reduction of hazardous fuels this year. The Programmatic Environmental Assessment will include considerations for future fuels projects within the Steese NCA.

3 Science

Fortymile Caribou Herd Habitat

Partners: BLM EIFO, ADF&G, Yukon Department of Environment (Environment Yukon), NPS, Salcha-Delta Soil and Water Conservation District, University of Montana, and Northern Arizona University.

Through successful cooperative management, including coordinated and targeted research efforts, the Fortymile Caribou Herd has grown and is now expanding into portions of the Steese NCA where it had long been absent. As the herd has grown, biologists and land managers have increasing interest in range condition and diet to gain a better understanding of critical habitat components and how they may respond to increasing caribou populations. This information will better allow managers to continue to optimize caribou range, an important value for management as identified in ANILCA.

Long-Term Habitat Monitoring Partnership

Heavy and regular use of much of the Steese NCA (especially the North Unit) has not occurred until recent years. To monitor long-term effects of caribou on habitats, EIFO established and funded a Cooperative Agreement with the Salcha-Delta Soil and Water Conservation District to establish exclosures to inventory and monitor caribou habitat. Excluding caribou from small, fenced areas will facilitate assessment of the effects of caribou foraging and trampling on forage and habitats. The design of these exclosures will likely be similar to those designed by the University of Alaska Fairbanks Reindeer Research Program and BLM Anchorage District on the Seward Peninsula.

Habitat Relationships

PhD candidates at University of Montana and Northern Arizona University focused on data analysis and preparation of publications based on their field work completed in previous years in association with the BLM and other agency biologists. This work is aimed at understanding how caribou select and use habitats, what the characteristics of high-quality habitats are, and which habitats are the highest in quality.

Fire and Caribou

In a project supported by NASA's Arctic-Boreal Vulnerability Experiment, Eric Palm, a University of Montana PhD student, utilized Fortymile caribou GPS data (and data of 14 other caribou herds), along with a regional map of lichen cover (produced with partial BLM funding), fire perimeter records (BLM Alaska Fire Service and Natural Resources Canada), and remotely sensed estimates of burn severity to explore how

caribou used burned landscapes. A journal paper has been submitted for publication.

Caribou Diet and Activity

Libby Ehlers, PhD candidate at University of Montana focused this year on analysis of diet and behavior of video collar-equipped caribou cows (an effort initiated by EIFO in 2016). More than 17,000 video clips have now been analyzed for behavior and habitat, and botanists have identified the plants consumed in more than 4,500 of those. This work is greatly refining our understanding of caribou diet, while supporting the importance of willow and lichen in the summer diet. Preliminary analyses of activity show that during periods when insect avoidance is highest, caribou spend much less time feeding in a day. Caribou diet and activity will improve population management decisions and aid in identification of critical habitats and design of habitat monitoring.



Photos clipped from some of the 4,500 videos in which forage items were identified by botanists, showing, clockwise from upper left, foraging on mushrooms, heavily browsed willow bushes, fireweed, horsetail, lichen, and one non-foraging video of a cow bedded with nose down in a snowfield during a hot day in July to avoid insects.

Remote sensing of caribou habitat

Using Landsat imagery to monitor plant biomass in caribou range, Northern Arizona University PhD candidate Katie Orndahl is using imagery and plant biomass data collected by aerial drones at plots in 2018 and 2019, along with satellite imagery, to quantify biomass of plant type groups in alpine habitats across the Fortymile herd's range. These plant biomass maps will be used by University of Montana researcher Libby Ehlers in her work to understand caribou habitat selection and relative quality.

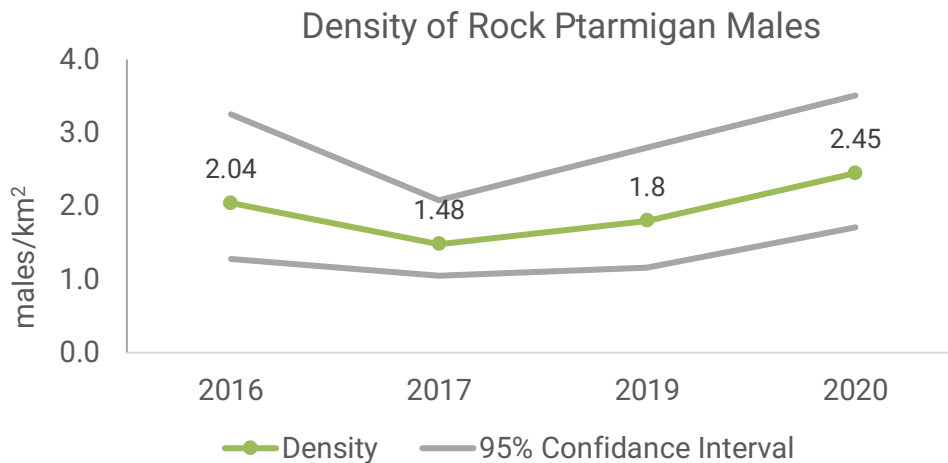
Rock Ptarmigan Reproductive Ecology

Rock ptarmigan are an important small game species along the Steese Highway and in the Steese NCA. Concern by both the public and ADF&G small game biologists over low abundance of rock ptarmigan along the Steese Highway prompted efforts to learn more about this population, which is highly prized by hunters. In 2015, ADF&G initiated a study to better understand changes in rock ptarmigan abundance, movement patterns, and reproductive ecology along the Steese Highway. BLM supported ADF&G's work by providing sites for the crew's base camp including use of the Central Field Station. ADF&G intends to use information gained from this project to inform decisions on bag limits and hunting seasons and will soon publish the work in a report on small game:

Carroll, C. J. and R. A. Merizon. 2021. Status of grouse, ptarmigan, and hare in Alaska, 2019 and 2020. Alaska Department of Fish and Game, Wildlife Management Report ADF&G/DWC/WMR-2021-X, Juneau.

Abundance Surveys

ADF&G established line transects within a 33.3-km² area for distance sampling of territorial males during the spring breeding period in April. Density estimates from yearly surveys are shown in the chart below. The estimated density of territorial male rock ptarmigan fluctuated during the study period, with surveys indicating that densities are currently increasing.



Density of territorial male rock ptarmigan estimated per square kilometer with 95% confidence intervals (CI), and the number of males detected from line transect distance sampling surveys in a 33.3 km² area near Eagle Summit on the Steese Highway, Alaska, 2016–2020. Insufficient data prevented calculation of a density estimate for 2018.

Ptarmigan Tracking

From 2015 to 2019, ADF&G captured and fit 231 rock ptarmigan VHF radio transmitters to document movement patterns, survival, and nest success of this heavily hunted population. ADF&G used the transmitters to track 128 females, 57 males, and 46 young-of-the-year.

Preliminary data suggest rock ptarmigan movements differed by sex. Yearling and adult males remained on or very near the breeding grounds throughout the year. However, yearling and adult females dispersed varying distances (up to 170 km) away from the breeding grounds to where they spent much of the winter months. These data are consistent with other studies that have documented differences in sex-specific dispersal rates. Further analysis on seasonal movements and survival is



Male rock ptarmigan being fitted with a transmitter by Alaska Department of Fish and Game biologists.

underway and will be available in an upcoming report on the ADF&G website at <http://www.smallgame.ADF&G.alaska.gov> under the "Research & Reports" tab.

Reproductive Ecology Graduate Research

In 2018, ADF&G received funding and initiated field work for graduate research that builds upon research at Eagle Summit and another site on the Denali Highway. The graduate research aims to compare the reproductive ecology of rock ptarmigan near Eagle Summit and along the Denali Highway. Estimates of nest initiation rates, clutch size, nest success, sex ratio at hatch, and brood survival will be compared between the two populations. Two years of field work were completed in summer of 2019. This year the data was analyzed at the University of Alaska Fairbanks.



Biologists captured adult rock ptarmigan to fit them with transmitters to relocate the birds throughout out the breeding season.

Publications

Van de Kerk, M, S. Arthur, M. Bertram, B. Borg, J. Herriges, J. Lawler, B. Mangipane, C. Lambert Koizumi, B. Wendling, L. Prugh. 2020. *Remote sensing reveals environmental drivers of Dall's sheep survival*. *Journal of Wildlife Management* 84:1127–1138.

Macander, M. J., E. C. Palm, G. V. Frost, J. D. Herriges, P. R. Nelson, C. Roland, K. L. M. Russell, M. J. Suitor, T. W. Bentzen, K. Joly, S. J. Goetz, and M. Hebblewhite. 2020. *Lichen cover mapping for caribou ranges in interior Alaska and Yukon*. *Environmental Research Letters* 15: 055001

4 Resources, Objects, Values and Stressors

Congress established the Steese NCA, as stated in ANILCA, to provide for the immediate and future protection of the lands in federal ownership within the framework of a multiple use and sustained yield and for the maintenance of environmental quality. Special values to be considered in planning and management of the area are caribou range and Birch Creek.

Caribou Range

Two caribou herds occupy lands within the Steese NCA and the White Mountains NRA. The White Mountains Caribou Herd resides year-round in the White Mountains NRA and Steese NCA's North Unit, while the much larger Fortymile Caribou Herd seasonally occupies the North and South Steese NCA units and the White Mountains NRA as well as lands to the southeast. Numbering an estimated 83,000 caribou in 2017, the Fortymile Caribou Herd is one of Alaska's most important herds for subsistence and sport harvest.

The Steese NCA's North Unit has long been the primary winter range of the small White Mountains Herd and has been consistently used heavily by the Fortymile Caribou Herd in winter since 2013. The Fortymile herd has also been making more use of the Steese NCA during the summer and began heavily using the upper Clums Fork drainage of Birch Creek in 2016. This was the main calving area for the herd in late 1960s and 1970s.

Interagency monitoring includes caribou numbers, productivity and survival, calf weights, pregnancy rates, movements and distribution, food habits, and assessment of vegetation from ground plot to satellite imagery scales. More details about the BLM's work to inform range management can be found in [Chapter 3: "Science, Fortymile Caribou Herd Habitat."](#)

Caribou Range Status and Trend Table

Status of Resource*	Trend*
Good	Declining somewhat as the Fortymile herd's use of the area increases. Lichens are most sensitive and showing increased signs of use, but are lightly used relative to the traditional core summer range. Two large burns in 2019 continued a recent trend of increased fire, which removes lichen-rich, old spruce stands.

*Excellent, Good, Fair and Poor are qualitative terms and are based on professional judgement intended to provide a simple overview of resource status. Trend is based on resource condition since the 1980 Steese NCA date of designation.

Caribou Range Inventory, Assessment, Monitoring Table

Acres in Steese NCA	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY20
1,198,113	1,198,113	100% of unit has suitable caribou range. The Fortymile herd moves throughout the unit and concentrates in certain areas seasonally, as indicated in the narrative above.	1,198,113

Stressors Affecting Caribou Range

Caribou can degrade range quality through overuse. Monitoring of caribou population, movements, and distribution continues 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 and its habitat and for providing subsistence opportunities as required by ANILCA. Through its partnerships with ADF&G, Yukon Department of Environment, and NPS, the BLM is gathering information on all of these topics.

Extensive burns eliminate lichen as a forage source for 60 or more years. Two large

burns occurred in the North Unit of the Steese in 2019 in an area heavily used by the Fortymile Caribou Herd in recent years. (Extensive burns occurred in 2004 and 2005 as well.). Although alpine summer range is thought to limit this caribou herd more directly, spruce-lichen winter range is declining in extent and may become limiting.

OHVs provide access for hunters to Fortymile caribou, but uncontrolled, cross-country use can impact caribou habitat and increase risks of invasive plants. Trail density can be an issue with high levels of hunting season use, possibly affecting caribou movements and migration. An analysis of Fortymile GPS-collar data indicated that caribou avoid areas near secondary roads such as the Steese Highway. Secondary roadways act as semi-permeable barriers to movements of caribou, and that effect is greater during hunting season. The trail assessment work conducted in 2020 will improve BLM's assessments of trail density in key migration habitats in the Steese NCA.

Birch Creek Wild and Scenic River Water Quality

In ANILCA, Congress directed the BLM to consider Birch Creek's special value in management of the Steese NCA and designated 126 miles of upper Birch Creek as a Wild and Scenic River. Approximately 77 miles of Birch Creek WSR runs through the Steese NCA's South Unit.

Extensive mining for placer gold has occurred in the Birch Creek drainage since the late 1800s. Early gold operations mined streambed gravels with little or no reclamation. Based on daily data collected from 2018 through 2020 at the BLM Birch Creek stream gage station (WSR mile zero) and discrete data collected during the July 2020 float trip, water quality turbidity levels are generally good at low to moderate water levels. During periods of high water, turbidity is elevated. Classifying the current Birch Creek water quality turbidity trend as "Improving" is based on preliminary 2018–2020 data collected by the BLM compared to historical reports and observations beginning in 1983, when the BLM developed the Birch Creek WSR River Management Plan and reported water quality as poor, as well as the ADEC 1992–1998 Section 303(d) listing of Birch Creek as an impaired water for elevated turbidity.

Birch Creek Water Quality Status and Trend Table

Status of Birch Creek Water Quality*	Trend*
<p>Good to Fair: Water quality is good to fair at low to moderate water levels based on limited 2018–2020 preliminary data. During periods of high water, erosion and permafrost melt continue to contribute to elevated turbidity levels.</p>	<p>Improving: Since the 1980 establishment of the Steese NCA unit, Birch Creek water quality has improved.</p>

*Excellent, Good, Fair and Poor are qualitative terms and are based on professional judgement intended to provide a simple overview of resource status. Trend is based on resource condition since the 1980 Steese NCA date of designation.

Birch Creek Inventory, Assessment, Monitoring Table

Miles in Steese NCA	Miles Inventoried	Miles Possessing Object	Miles Monitored in FY19
77	77	100%	77

Stressors Affecting Birch Creek Water Quality

Warmer Summer Temperatures

The Steese NCA landscape increasingly shows impacts of elevated annual temperatures, including vegetation changes, more frequent wildfires, and soil instability with the loss of permafrost as evidenced in the pictures below, showing an exposed ice lens and a mass-slump feature in the Birch Creek WSR corridor. Adverse impacts to water quality including elevated turbidity levels often result from increased instability and erosion of permafrost soils.



Pictures of a large and active eroding cutbank with an exposed ice lens on Birch Creek WSR.

Large embankment slump/debris slide on Birch Creek WSR near the confluence of Harrington Fork, July 13, 2020. Inflatable canoe in center foreground for scale.



5 Summary of Performance Measure

The Congressionally defined purposes for designation of the Steese NCA were detailed in the previous chapter. Those objects, resources, and values are generally in good condition, and have remained in good condition since the NCA was established. The special values which the NCA was created to conserve, specifically those related to caribou habitat and Birch Creek, are still present and are still drawing scientists, the visiting public, and users from local communities.

The following assessment focuses on those Resources, Objects, and Values currently being monitored in the NCA. The Science Plan has not been finalized to establish additional benchmarks.

Resources, Objects, and Values Status Summary Table		
Resource, Object, or Value	Status*	Trend*
Caribou Range	Good	Declining
Birch Creek WSR Water Quality	Good to Fair	Improving

*Excellent, Good, Fair and Poor are qualitative terms and are based on professional judgement intended to provide a simple overview of resource status. Trend is based on resource condition since the 1980 Steese NCA date of designation.

6 Manager's Letter

I think we can all agree that 2020 has been a challenging year, and I'm proud of my staff for everything that we've accomplished this year. With the many challenges that came with the COVID-19 pandemic, we learned innovative ways to interact with the public. As many of us transitioned to teleworking, routine essential work continued, with modifications to ensure public and employee safety. We were able to accomplish a lot of field work while keeping our employees safe but were unable to have as much personal interaction with the public as we normally do.

While out-of-state tourism declined this year, we were happy to see that visitation was at an all-time high. This was due to increased in-state tourism, as many Alaskans took time to connect with their public lands. The large caribou hunt in the fall also attracted many hunters from across the state.

Subsistence hunting in the Steese NCA continues to be important to rural Alaskan residents. The Eastern Interior Field Manager was delegated the authority this year by the Federal Subsistence Board to manage the Fortymile caribou subsistence hunt. Good relationships with our partner agencies, the National Park Service, U.S. Fish and Wildlife Service, and the Alaska Department of Fish and Game, assisted us with notifying the public of hunting season and bag limit changes that occurred this year. The cooperation with these agencies to manage this hunt is greatly appreciated.

Work continues on the Steese White Mountains Travel Management Plan. Public meetings are tentatively being scheduled for late March or early April 2021. It is always helpful to get comments from the public on how they would like to see their public lands managed.

I was able to fill most of our vacant positions this year, including some that had been vacant for multiple years. One key position that is still vacant is the Field Manager. I hope to fill this position in early 2021.

As 2021 progresses, I hope that we will be able to resume in-person interactions. If circumstances don't allow in-person meetings, I will continue to provide information virtually and develop innovative ways to interact with the public.



NATIONAL CONSERVATION LANDS

Steese

National Conservation Area

Fairbanks District Office
Bureau of Land Management
Eastern Interior Field Office
222 University Avenue
Fairbanks, AK 99709
Phone: 907-474-2200

January 26, 2021

The mention of company names, trade names, or commercial products does not constitute endorsement or recommendation for use by the federal government.

Floaters enjoy a rainbow over Birch Creek Wild and Scenic River