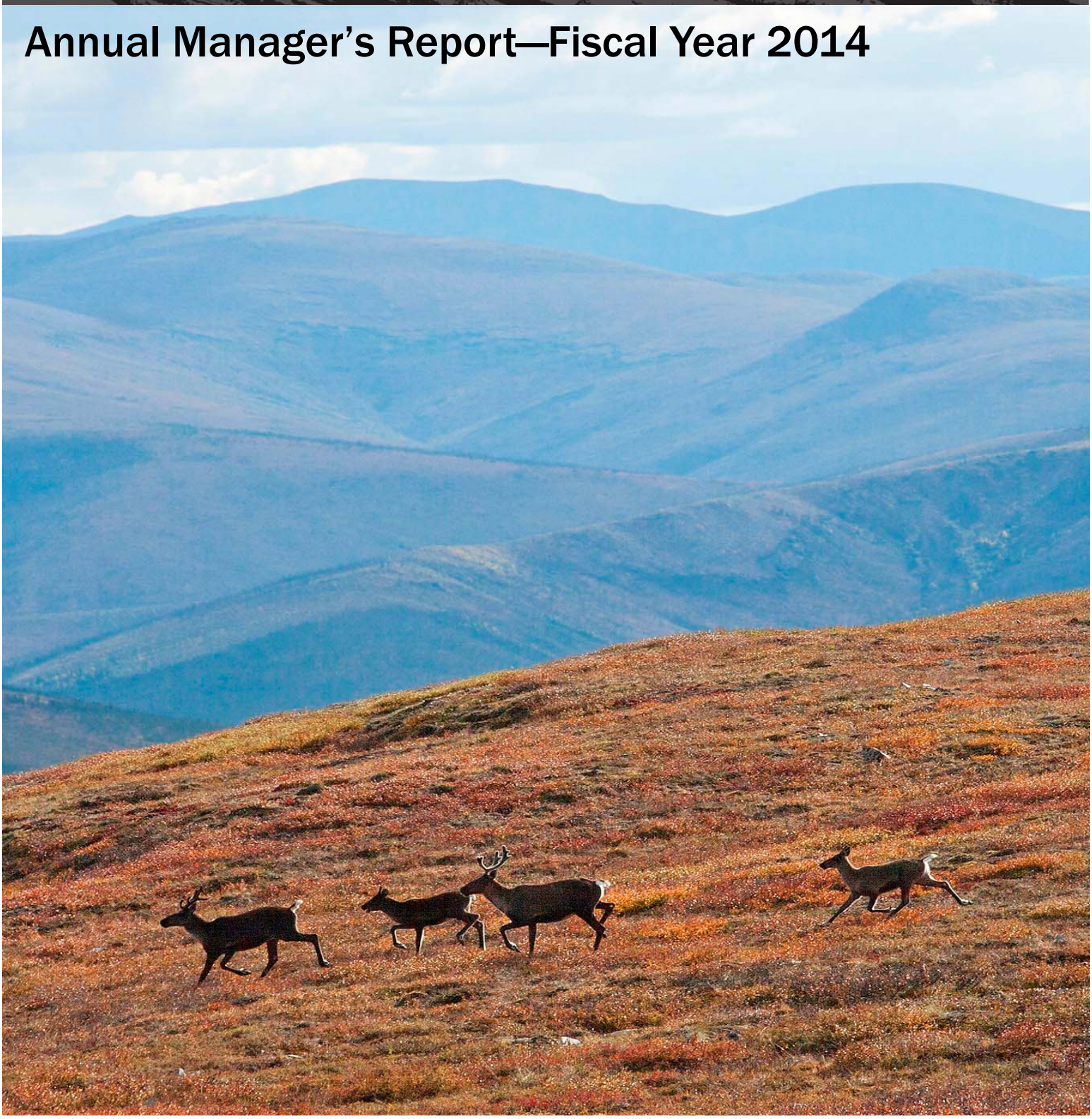
NATIONAL CONSERVATION LANDS

Alaska

Steese

National Conservation Area

Annual Manager's Report—Fiscal Year 2014



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1 Steese Profile

Designating Authority

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

In ANILCA, 1,208,624 acres were designated as the Steese National Conservation Area (SNCA). Congress directed the Bureau of Land Management (BLM) to consider the special values of caribou range and Birch Creek in the management of the SNCA. The SNCA is divided into a North Unit and a South Unit, which are separated by State of Alaska lands and the Steese Highway. Seventy-seven miles of Birch Creek Wild and Scenic River (of a total of 126 miles, all designated 'wild') are located within the SNCA. The unit is managed out of the Eastern Interior Field Office (EIFO).

Acreage

Total Acres in Unit	1,208,624
BLM Acres	1,208,624
Other Federal Acres	0
State and Private Acres*	14,114

*State and Private acres are not part of the designation's federally managed acres.

Contact Information

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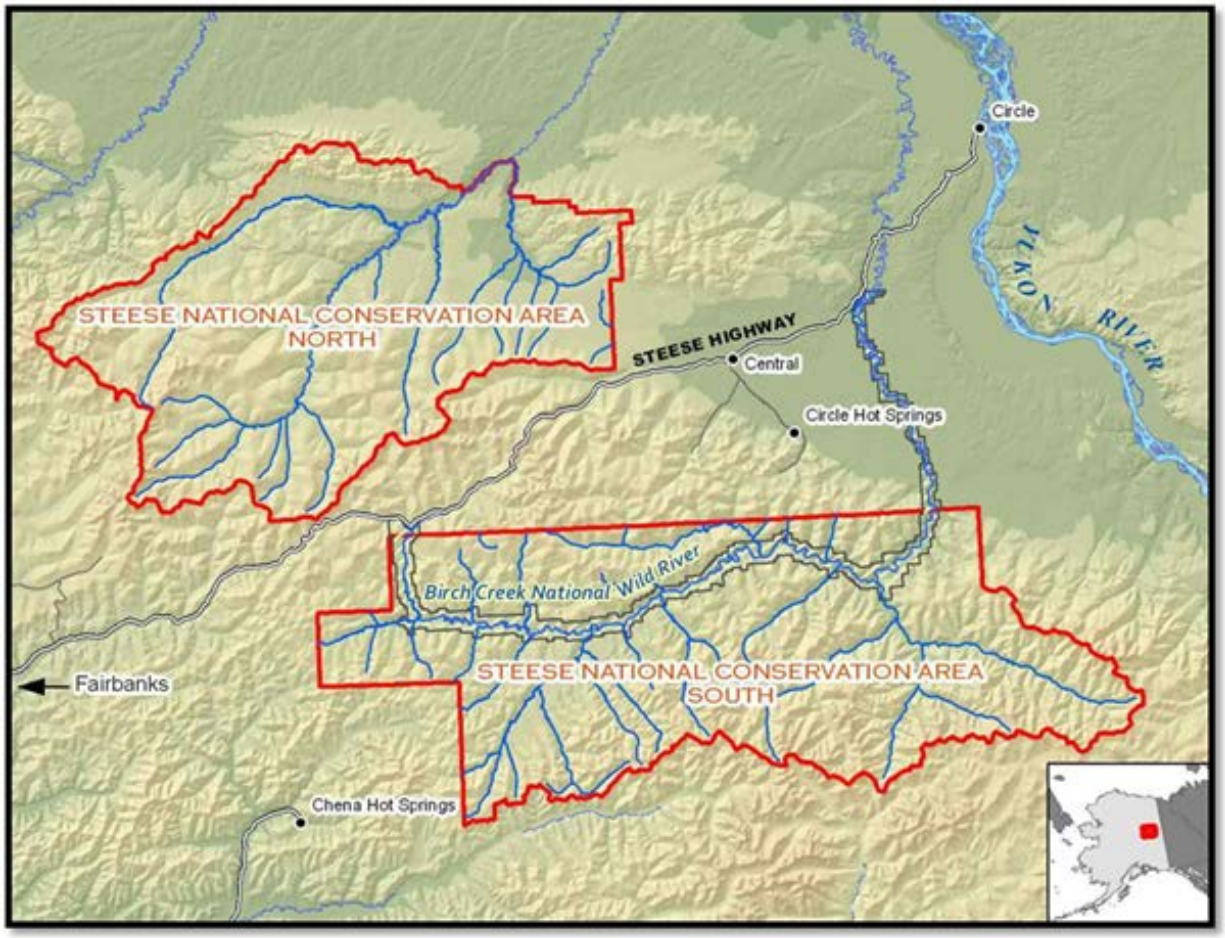
Field Office Name	Eastern Interior Field Office
District Office Name	Fairbanks District
State Office Name	Alaska

Budget

Total FY14 Budget	$675,800
Subactivity 1711	$476,000
Other Subactivities' Contributions	$199,800
Other Funding	$0

Map of Steese National Conservation Area



Map of the Steese National Conservation Area, Alaska

Managing Partners

The SNCA does not currently have established partnerships to assist with the management of the unit.

Staffing

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

Position	Series/Grade	% Time Dedicated	Home Office
Field Manager	0340/13	20	FO

Position	Series/Grade	% Time Dedicated	Home Office
Law Enforcement	1801/11	20	FO
Assistant Field Manager/Resources	0340/12	20	FO
Assistant Field Manager/Visitor Services	0340/12	20	FO
Archeologist	193/12	10	FO
Fish Biologist	0482/11	20	FO
Physical Scientist	1301/11	10	FO
Realty Specialist	1170/11	10	FO
Wildlife Biologist	0486/12	20	FO
Wildlife Biologist	0486/11	50	FO
Outdoor Recreation Planner	0023/11	70	FO
District Manager	0340/14	10	DO
Budget Analyst	0560/11	10	DO
NLCS, Youth, Volunteers State Office Lead	1001/12	30	SO

2 Planning and NEPA

Status of the Resource Management Plan

Record of Decision (ROD) for the Steese National Conservation Area Resource Management Plan (RMP) was signed February 6, 1986.

The Eastern Interior Field Office is developing a new RMP that will cover the management of 6.7 million acres, including the SNCA.

- The Draft Eastern Interior RMP Environmental Impact Statement was released to the public, February 2012.
- Anticipated Issue of the Notice of Availability and release for protest in August 2015.
- Anticipated ROD in December 2015.

Status of Activity Plans

Recreational Activity Management Plan, October 1993

River Management Plan (Birch Creek National Wild River), December 1983

There is no Travel Management Plan for the SNCA. However, an OHV designation as Limited exists in the 1986 RMP with limitations listed for weight and seasonal uses.

Travel Management Plans and Recreational Activity Management Plans will be deferred for completion after the ROD is posted for the proposed RMP. Interim management rules apply until the activity plans are completed.

Claytonia flower

Status of the RMP Implementation Strategy

The RMP implementation strategy will be developed once the new RMP ROD is signed.

Key National Environmental Policy Act Actions and/or Project Authorizations

The BLM processed one National Environmental Policy Act (NEPA) action in 2014 for activities in the SNCA for removal of solid waste from unauthorized use sites along Preacher Creek in the North Steese Unit (NEPA number DOI-BLM-AK-F020-2014-0007-CX). In 2013, the BLM processed four NEPA actions for Special Recreation Permits with activities occurring on both the SNCA and White Mountains National Recreation Area. These will be up for renewal in future years. All NEPA actions for EIFO are cataloged and available to the public through the BLM's online NEPA register.

Campers wait for weather to pass along the Pinnell Mountain National Recreation Trail

3 Year's Projects and Accomplishments

General Accomplishments

Preacher Creek Cleanup

The Preacher Creek drainage is located within the SNCA in the North Unit and is part of the Birch Creek WSR watershed. In 1985, the BLM identified a trespass location with a 16'x24' structure, equipment, tools, scrap metal, hazardous materials, churn drill, and solid waste. The BLM received funding for cleanup in 2014 and was able to award a contract for removal action.

The site is located approximately 40 miles from the Steese Highway via rough trail and required helicopter operations to access the location. All wastes were removed from the site in July 2014 except for a trailer and the debris from the structure. Ten-thousand pounds of scrap metal and 1,500 pounds of solid waste were pulled off the site via sling load helicopter operations. Removal took 18 sling loads over three days of flight operations as well as an additional seven flights to haul personnel and gear to the site. Scrap metal was taken in for recycling and the solid waste was taken to the landfill. The trailer will be removed in the summer of 2015, depending on funding and helicopter availability. The churn drill was recovered and will be renovated in conjunction with a Midnight Sun Boy Scout Council volunteer service project and made available as an interpretive display in the future.

Churn drill on location

Sling load ready to be moved from the site

Watershed Assessment Birch Creek and Crooked Creek

The BLM Eastern Interior Field Office received a letter of recognition from the director of the State of Alaska Department of Environmental Conservation (ADEC) for assisting the ADEC with a FY14 assessment of the Crooked Creek watershed near Central, Alaska.

BLM and ADEC are collaborating on a multi-year monitoring project, documenting flows and water quality for two adjacent placer-mined watersheds, including Crooked Creek, primarily on State land, and the Birch Creek watershed, which includes the Birch WSR managed by the BLM.

Assisting ADEC with watershed assessment is a high priority for BLM because Crooked Creek is a major tributary to Birch Creek WSR, and headwaters of the Crooked Creek

watershed are adjacent to the eastern boundary of the BLM-managed SNCA.

Much of the 510-square mile Crooked Creek watershed has been placer-mined since the early 1900s and several of the streams within the watershed were listed in an ADEC report as water quality-impaired for turbidity in 1992. Turbidity sources in the watershed are both point sources from active placer mines and nonpoint sources, such as runoff from active and abandoned placer mines, stream bank erosion, and re-suspension of deposited sediments.

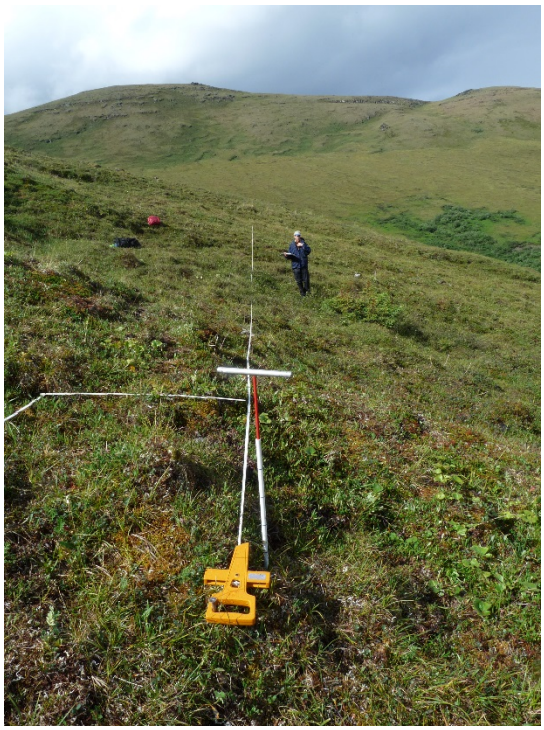
As noted by ADEC, "The Crooked Creek watershed assessment is a high priority for the Division and will hopefully result in actions leading to improved water quality. The data will also complement efforts by BLM in the Birch Creek watershed."

Current Areas of Focus

Work in the SNCA focuses on caribou monitoring, water quality surveys, site reclamation, cultural inventories, and visitor services.

Caribou Range

The BLM continued work with the Alaska Department of Fish and Game (ADF&G) and University of Alaska Fairbanks (UAF) for caribou monitoring and habitat management. This work will be detailed in the **Partnerships** and **Science** sections. Continued work with U.S. Geological Survey (USGS) for water quality monitoring on Birch Creek will also be covered in the Partnerships section.

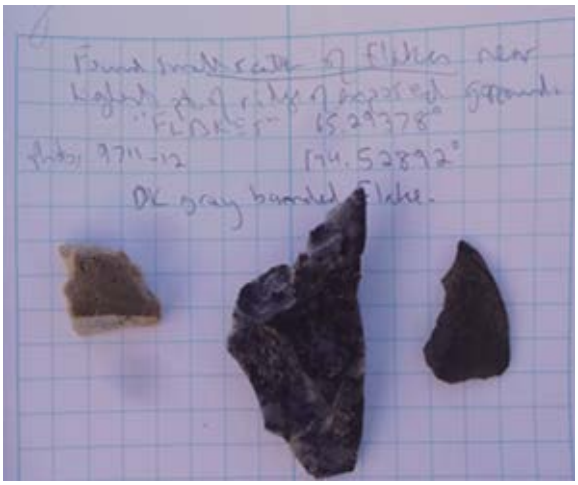


Four field trips were made by BLM biologists in 2014 to collect caribou fecal pellets to quantify diets to facility habitat monitoring. Two additional long-term alpine vegetation monitoring sites were established on the South Fork of Birch Creek

Cultural Surveys

Eastern Interior Field Office archeological staff conducted cultural resources surveys on federally managed lands on the South Fork of the Birch Creek drainage in the southern portion of the SNCA in August 2014. The surveys were conducted per Section 110 of the National Historic Preservation Act (1966, as amended), which requires (in part) the survey of all federally-managed lands for cultural resources.

Aerial reconnaissance along creeks looking for prehistoric and historic sites occurred along hundreds of miles of creeks during the three flight days of the project (August 2-4). Twelve separate pedestrian ground surveys were conducted on ridge tops overlooking the Yukon Fork of the South Fork of Birch Creek, Caribou Creek, Puzzle Gulch, and Sheep Creek. A total of 650 acres were intensively surveyed, and seven new sites were recorded, including five prehistoric lithic sites found during the ridge top surveys as well as a historic helicopter crash site. The prehistoric sites are interpreted as short-term campsites or resting sites for protohistoric or prehistoric Alaska Native hunter-gathers. These sites also likely served as hunting overlook sites for large game animals. The helicopter crash site consists of the ruin of a Sikorsky H-5 Helicopter that crashed due to engine failure on July 25, 1950. The aircraft was based out of Ladd Army Airfield, now Ft. Wainwright, Alaska. The helicopter was likely used as an air ambulance and/or rescue aircraft. An external patient carrier was found at the crash site. Most of the aircraft is present, although the main rotor blades were not noted among the debris.



Prehistoric stone artifacts found during cultural survey in the SNCA.

Sikorsky rear rotors from a historic helicopter crash site found while flying over Big Windy Creek

Fisheries Surveys

BLM fisheries staff conducted surveys in Twelve Mile Creek, Ptarmigan Creek, and Birch Creek. Electrofishing techniques and aerial surveys were used to determine the presence/absence of fish in streams as well as stream channel stability in creeks with active placer mining operations to assist the Field Office in determining applicable stream reclamation standards.

In 2014, the fisheries program conducted fish and stream surveys on 10 streams within the SNCA. Seven of the streams were chosen randomly and three of the streams were targeted as being previously placer mined. The inventories were conducted using BLM's national protocol for Aquatic Assessment, Inventory, and Monitoring (AIM). The goal is to determine the baseline chemical, physical, and biological condition of streams and to better understand how placer mining affects those conditions. The data collected is being summarized and will be made available sometime in 2015.

BLM fisheries staff conduct surveys as part of the Aquatic Assessment, Inventory and Monitoring program (AIM).

Subsistence Management
In ANILCA Title VIII Section 802, Congress declared that fish and wildlife on federal lands in Alaska be managed for subsistence uses. Federal land managers in Alaska manage subsistence harvest of fish and wildlife on unencumbered federal lands. ANILCA Title IV identified caribou range as a special value in the SNCA. The Fortymile Caribou herd is the primary herd within the SNCA. It moves throughout the area from calving to post-calving. The Eastern Interior Field Office Manager has responsibility and authority to make in-season changes to caribou hunts, including emergency closure actions. Close coordination with the ADF&G, the NPS, and the ANILCA-mandated Regional Advisory Councils is required to manage the harvest, herd, and the herd range. BLM biologists have forged a partnership with the ADF&G to conduct population, distribution, harvest, and habitat monitoring. The Fortymile Caribou herd is the most important caribou subsistence resource in Eastern Interior Alaska.

Education, Outreach, and Interpretation

Outdoor Days
BLM staff participated in the interagency Outdoor Days for the Fairbanks North Star Borough School District by hosting a Leave No Trace camping clinic. The three-day Outdoor Days event offers all district sixth-grade students a chance to engage with public land agencies and learn outdoor skills. SNCA staff members engaged with over 270 students.

Hands on the Land
The BLM initiated a Hands on the Land program with the Watershed Charter School in 2013 with programming to begin in 2014. Outreach included working with grades six, seven and eight integrating current science strategies in the SNCA and the adjacent White Mountains National Recreation Area in classroom studies including hydrology and vegetation studies. Winter field trips will complete the curriculum in FY15.

Recreational users in the SNCA were recorded for Birch Creek WSR, the Pinnell Mountain National Recreation Trail, and the two waysides at Twelvemile Summit and Eagle Summit as well as dispersed use. The total for FY14 was 7,602 user days.

Partnerships

Government of Yukon, Department of Environment
The SNCA was historically heavily used as a calving area by what was then known as the Steese-Fortymile herd. In 1920 this herd numbered several hundred thousand animals but declined to an estimated low of 6,500 in the 1970s and the herd used only a fraction of its former range. In 1994 an interagency, international group was formed with the goal of restoring the caribou population and restoring use of the former range. During the last five years, caribou have expanded their range back into the Steese NCA, and sightings along the Steese highway are once again common. The herd expanded 9-fold in numbers from 1973 to 2011, and biologists are now concerned about range overuse and a resulting population decline. In addition, a small White Mountains caribou population exists in the

SNCA and increasingly mixes with the expanding Fortymile herd, complicating sport and subsistence harvest management. The increased level of cooperation with Yukon government partners proved fortuitous when in late September 2013, the majority of the Fortymile herd made an abrupt and unusual migration east across the Alaska-Yukon border and continued well east into the Yukon, utilizing portions of the herd's historical range that have long been unoccupied.

In 2014, BLM, ADF&G, the Environment Yukon, and the NPS had several meetings to facilitate cooperative management of the Fortymile Caribou Herd. EIFO wildlife biologists collaborated with these partners to prepare one paper and one poster presentation at the 15th North American Caribou Workshop, held in Whitehorse, Yukon in May: Gross, J.A., R. Gronquist, M. Suitor, and T.W. Bentzen, *Managing for Recovery of the Fortymile Caribou Herd*; Bentzen, T.W., R. Boertje, J. Gross, J. Herriges, M. Kienzer and M. Suitor, *Abrupt Range Expansion in the Recovering Fortymile Caribou Herd*.

<u>Alaska Department of Fish and Game (ADF&G)</u>

The BLM uses two Challenge Cost Share assistance agreements with ADF&G to cooperatively monitor two caribou herds, including periodic telemetry flights to monitor distribution, calving surveys, censuses, and fall composition counts. Thirteen GPS and VHF radio collars were refurbished or purchased in FY 2014 for deployment on White Mountains caribou in FY2015 through Challenge Cost Share assistance agreements.

In addition, BLM supports the monitoring of the Fortymile Caribou Herd, (which at 51,000 animals is the largest herd using the SNCA) through a Challenge Cost Share Agreement with ADF&G. This includes monitoring of caribou distribution through GPS/satellite collars. In FY 2014 BLM purchased three additional GPS collars for deployment in FY2015 through Challenge Cost Share assistance agreements.

BLM biologists radio collar caribou in the Steese NCA. BLM has been working cooperatively with the Alaska Department of Fish and Game to purchase, fit, and monitor the Fortymile and White Mountains caribou herds.

University of Alaska Fairbanks (UAF)
BLM biologists partnered with UAF to measure the effectiveness of caribou habitat management in light of ongoing changes in vegetation related to climate change. Changes will be evaluated through a program of long-term vegetation monitoring, including monitoring of fire effects, monitoring of caribou forage, and monitoring and control of weeds in burned habitats.

U.S. Geological Survey (USGS)
Through an interagency agreement, the BLM and the USGS conducted cooperative water quality surveys and monitoring of stream flow. Data are evaluated for systematic changes in water quality and quantity. Continued monitoring is essential to ensure that water quality and quantity are protected and that any adverse impacts are mitigated.

Natural Resources Conservations Services (NRCS)
The BLM funded Natural Resources Conservation Services (NRCS) through an interagency agreement to conduct ecological site inventory and soil survey work for the North and South Steese Units. This partnership work has been in progress since 2011 as a five-year project. Soil and plant community descriptions were collected at each sample site. Data is used to develop soil maps at a scale of 1:63:360. Map units and ecological sites are entered into the National Soil Information System database.

Volunteers

The BLM utilized two assistance agreements in 2014 for youth-hosted workers to assist with visitor services.

EIFO hosted workers from Geo Corps, the Student Conservation Association (SCA) and the Chicago Botanical Gardens. Volunteers from Geo Corps and SCA each put in over 600 hours conducting route inventories, assisting with reclamation projects, and performing recreational visitor services. Volunteers from the Chicago Botanical Gardens participated in invasive plant surveys throughout EIFO, including a survey of invasive plants along the Pinnell Mountain National Recreation Trail in the SNCA.

Land (or Interests in Land) Acquisitions

There were no land acquisitions or interests in lands activities completed in fiscal year 2014.

4 Science

Science

Fire History and Caribou Habitat Monitoring Project

The BLM continued to work with the UAF School of Natural Resources to compile and analyze field data collected from 2001 to 2013 documenting fire history in the SNCA, effects of fires on wildlife habitats, effects of climate change on spruce forests, and conditions of caribou habitat.

Cooperative White Mountain Sheep Survey

Annual Dall sheep censuses have been conducted (or attempted) since 1994 in cooperation with ADF&G and US Fish and Wildlife Service (USFWS). The White Mountains Sheep population utilizes both the SNCA and the WMNRA as well as a portion of the Yukon Flats National Wildlife Refuge. The latest census was successfully completed in August 2014, documenting what appears to be a continued population decline, characterized by relatively low lamb production and survival, likely related to winter weather and a late spring.

5 Resources, Objects, Values, and Stressors

Caribou Range

Upon the SNCA's establishment in 1980, Congress directed the BLM to consider the special value of caribou range in the conservation area's management. Two caribou herds occupy lands within the SNCA and the White Mountains National Recreation Area (WMNRA). The White Mountains Caribou Herd resides year-round in the WMNRA and SNCA North Unit, while the much larger Fortymile Caribou Herd seasonally occupies both SNCA units and the WMNRA as well as lands to the southeast. In 1920 the Fortymile herd was estimated to number over 500,000 animals, and its range extended as far as Whitehorse, Yukon, Canada. Numbering about 51,000 caribou today, the Fortymile herd is one of Alaska's most important herds for subsistence and sport harvest.

Status and Trend Table

Status of Resource, Object, or Value	Trend
Good	Stable

Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY14
1,208,624	1,208,624	100% of unit has suitable caribou range. However, the herd moves throughout the unit as indicated in the narrative above	1,208,624

Stressors Affecting Caribou Range

(Please refer to the end of this section.)

Birch Creek

In 1980, Congress directed the BLM to consider Birch Creek's special value in management of the SNCA and designated a 126-mile-long river corridor as a Wild and Scenic River (WSR). Extensive mining for placer gold has occurred in the Birch Creek drainage since the late 1800s. Early gold operations mined streambed gravels—in many cases from valley wall to valley wall—with little or no reclamation. Upper Birch Creek and several small tributaries, located primarily on State of Alaska land, have been listed under

the Clean Water Act as impaired waters for excess turbidity. Placer-mining operations that lacked erosion and effluent control measures have been the principal cause of elevated turbidity levels. Although recent regulatory enforcement has improved water quality downstream of active mines, protecting Birch Creek water quality continues to be a substantial challenge. The approximately 14 mining claims staked within the wild and scenic river corridor are now all abandoned and void. No federal mining claims currently exist within the Birch Creek WSR corridor, although abandoned mine land features are present in some areas.

Status and Trend Table

Status of Resource, Object, or Value	Trend
Fair	Upward

Inventory, Assessment, Monitoring Table

Acres in Unit	Acres Inventoried	Acres Possessing Object	Acres Monitored in FY14
1,208,624	126 river miles	126 river miles	126 river miles

Stressors Affecting Caribou Range and Birch Creek

Mining Activity

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

Abandoned Mine Reclamation

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

Current/Future Mining on Non-BLM Managed Lands

The SNCA and Birch Creek's headwaters area is highly mineralized and of interest for further exploration and development by the mineral industry. The area has mixed ownership with active mining claims. Mining activity upstream and adjacent to the SNCA boundary has the potential to adversely impact water quality, fish, and aquatic resources within the SNCA. Monitoring and enforcing mitigation measures, as well as the use of improved mining and reclamation techniques, will be necessary to reduce adverse impacts to the resources adjacent to and within the SNCA.

Climate Change

Climate change effects are becoming visible in the SNCA landscape including vegetation changes and soil instability with the loss of permafrost. These effects have an impact on caribou habitat and require staff time dedicated to monitoring these effects as well as new scientific approaches to ecosystem modeling.

6 Summary of Performance Measure

Summary Table*		
Resource, Object, or Value	**Status**	**Trend**
Caribou Range	Fair	Stable
Birch Creek	Fair	Upward

Steese

National Conservation Area

Bureau of Land Management
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February 2014

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