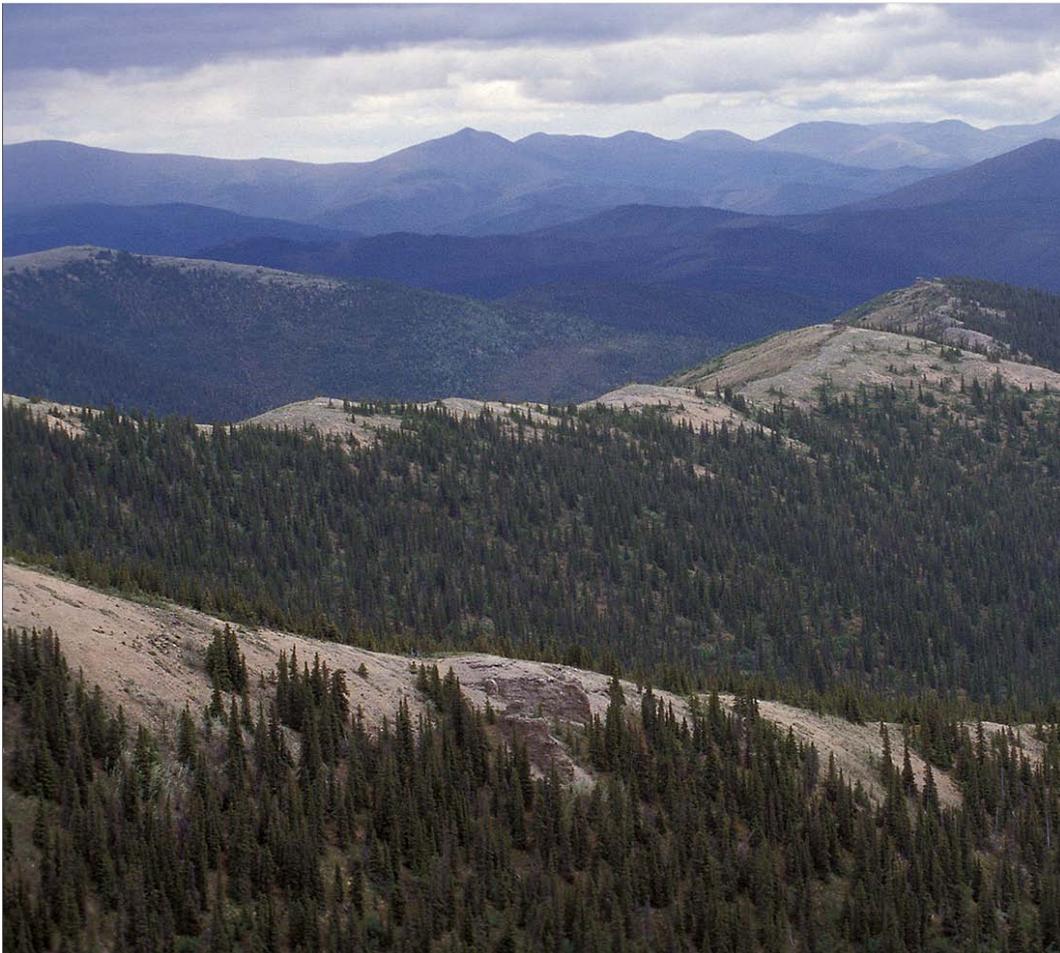


Steese National Conservation Area

Fiscal Year 2009 Manager's Report



Eastern Interior Field Office, Alaska



**BUREAU OF LAND MANAGEMENT
NATIONAL LANDSCAPE CONSERVATION SYSTEM**

**Steese National Conservation Area
FY 2009 Manager's Report**

Introduction

- **Unit:** Steese National Conservation Area (SNCA)
Eastern Interior Field Office
Fairbanks District Office
BLM Alaska State Office

- **Contact Information:** 1150 University Ave.
Fairbanks, Alaska 99709
907-474-2320
http://www.blm.gov/ak/st/en/prog/nlcs/steese_conserv.html

- **Manager:** Lenore Heppler, Field Manager, Eastern Interior Field Office
Lenore_Heppler@blm.gov

- **Established:** Alaska National Interest Lands Conservation Act (ANILCA),
P.L. 96-487, December 2, 1980.

- **Acreage:** 1,208,624 BLM acres



- **General Information:**
 - In ANILCA, congress directs BLM to consider these special values in planning and management of the area: caribou habitat and water quality.
 - The SNCA is divided into two units (the North Steese Unit and the South Steese Unit) separated by State of Alaska lands and the Steese Highway.
 - Relationship to other NLCS units: 77 miles of the Birch Creek National Wild River (of a total of 126 miles) runs through the SNCA.
 - Location: approximately 100 miles northeast of Fairbanks, Alaska.

1. Natural and Heritage Resources Conditions

a. Natural resources trends

- The ecosystems of the SNCA are intact and healthy with little human-caused disturbance. Less than five percent of the area is considered impacted by human use. Human impacts include: past and current placer mining, access roads, and several hundred miles of off-highway vehicle (OHV) routes.
- Invasive, non-native, or noxious weeds: Only minimal inventory has been completed for the SNCA, mostly in disturbed and burned sites. Surveys indicate that some plants of highest management concern are moving up the highway, and some are jumping a considerable distance into the SNCA at trailheads. The plant of most concern, and the most common, is *Chenopodium album* (lamb's quarter). *Vicia cracca* (bird vetch) a plant on the state's noxious weed seed list, was also found. Only a small amount of control has been conducted in the SNCA, mostly incidental to inventory.

b. Heritage resources trends

- Cultural Resources:
 - The overall condition of the cultural resources in the SNCA remains one of stability.
 - While slow, natural deterioration continues at most known sites, there were no large-scale, persistent adverse impacts occurring to cultural resources from natural human causes in 2009 (e.g., river erosion, landslides, wildland fires, or collecting/looting).
- Birch Creek National Wild River: Overall conditions are good.



Birch Creek NWR was designated in ANILCA without identifying the Outstandingly Remarkable Values (ORV). In the Eastern Interior Resource Management Plan/Environmental Impact Statement (EIRMP/EIS), these ORVs will be designated.

c. Land Health Assessments: Since the ecosystems of the SNCA are largely intact, our efforts have focused on locations with high-visibility disturbance and on preventing erosion and impacts to water quality of the Birch Creek National Wild River, which transects the southern unit of the SNCA.

d. Inventory

- Heritage Resources:
 - Less than 3% of the SNCA has been surveyed for cultural resources at the Class III level of field inventory owing primarily to the large size of the Conservation Area, its overall inaccessibility, and the general lack of large-scale development that occurs on this land (i.e., intensive cultural survey is largely limited to relatively small pockets of land, ≤ 5 acres, such as small-scale mining operations).
 - Primarily as a result of this relative lack of development inside the SNCA:
 - Two reviews for impacts to cultural resources were conducted in FY2009, as required by NEPA and the National Historic Preservation Act (1966, as amended.)
 - 21 known cultural sites were monitored in FY2009.
 - 2,130 acres of ground were intensively and pro-actively surveyed for archaeological resources, in which six new archaeological sites were found and recorded.
 - No major restoration projects were conducted.



Archaeologists inventory a historic mining camp building. Newspapers from 1925 were found in the walls, helping to date the building.

- Natural Resources:
 - **Preacher Creek Fall Spawning Ground Survey**

The Birch Creek watershed is known to support coho salmon, but limited information exists as to the extent or location of coho spawning activity. A helicopter was used to perform a spawning ground survey on Preacher Creek, a large tributary of Birch Creek, in September 2009. This was the first fall spawning ground survey performed

on Preacher Creek. The survey started at the lower extent of BLM-managed land on Preacher Creek and continued upstream to the mouth of American Creek. A survey was also performed on the North Fork of Preacher Creek on the same day. Although weather and visibility conditions were good, no salmon were observed. The results suggest that coho salmon do not use this portion of Preacher Creek for spawning activities. Future surveys may be warranted to determine the presence/absence of coho spawning activity in Preacher Creek.

- **Birch Creek Stream Gage**

During 2009, United States Geological Service (USGS)/BLM jointly operated a daily stream gage with satellite telemetry near the Birch Creek wayside, above Twelvemile Creek, Steese Highway Mile 94. The stream gage recorded stage, precipitation, and air temperature from mid-May through the end of September. Historical daily mean streamflow and climate data are available at the following website: <http://waterdata.usgs.gov/nwis/uv?15392000>. The stream gage was operated by the USGS through a cooperative interagency agreement funded by the BLM. Real-time streamflows are used by the public to plan recreational float trips. The BLM and other federal and state agencies use the data to monitor water resource conditions and climate change.

- **Birch Creek Water Quality**

Water-quality field parameters of pH, conductivity, dissolved oxygen, temperature, and turbidity were measured daily using an automated multi-parameter water quality meter. Concurrent daily water samples were collected to measure total suspended solids (TSS) using an automated sampler from June through August at the Birch Creek stream gage site near Steese Highway Mile 94. Historic placer mining in the Birch Creek watershed has adversely affected water quality. The U.S. Environmental Protection Agency (EPA) in 1996 issued a total maximum daily load (TMDL) of 20 mg/L and 5.85 nephelometric turbidity units (NTU) for turbidity in upper Birch Creek, with an exception for storm events. See the following website for an EPA authored (TMDL) report for Upper Birch Creek: <http://www.dec.state.ak.us/water/tmdl/approvedtmdls.htm>

The Birch Creek gage site is downstream from several placer-mining operations with varied stages of reclamation. The BLM monitors water-quality parameters to document water resource and climate change conditions in the watershed. Preliminary review of 2009 data shows turbidity was less than the TMDL of 5.85 NTU except during storm events. Daily median water quality parameters and total suspended sediment were in compliance with ADEC water quality standards. Final data will be reviewed and compiled with streamflow and precipitation data. Birch Creek water-quality data will be archived in the BLM Alaska Water Resources Catalog.

e. Restoration Projects in FY2009:

- **Harrison Creek Stream Channel Reclamation Project**

Harrison Creek is a major tributary to Birch Creek National Wild River. The drainage was extensively placer mined for gold since the late 1890s, and some areas were abandoned prior to being reclaimed. The headwaters of the drainage have been extensively placer mined since the early 1900s, and approximately 11 miles of the creek and associated floodplain are disturbed. The BLM is in the process of reclaiming various reaches of Harrison Creek. The reclamation consists of (1) flattening and contouring tailing piles, and (2) constructing or expanding floodplains. The purpose of the proposed reclamation activities is to promote natural revegetation of the disturbed landscape and thereby promote the re-establishment of riparian habitat, and to promote channel and floodplain stability, which will reduce turbidity and sediment loads in the stream. By reducing of the amount of inorganic sediment eroding from the stream channel, resident fish populations will have the opportunity to expand and colonize previously mined areas.

In 2001, with funding through the Abandoned Mine Lands (AML) Program, Phase I of Harrison Creek reclamation was initiated to improve 1.5 miles of the stream channel and associated floodplain. In 2007, Phase II and III were initiated to continue this work on three more sections of stream near the Ptarmigan Gulch confluence with Harrison Creek, for a total of 0.82 miles of reclamation. Work included constructing a new access trail, removing and replacing 22,000 square yards of topsoil (approximately one foot deep), and moving 44,000 cubic yards of material. The contract work began in the spring of 2009 and was completed in the fall. Work was funded with AML funds.

Design for Phase IV reclamation work was performed in the winter of 2009. Phase IV construction is planned to reconstruct 1.1 miles of Harrison Creek. The final quantities of tailings and topsoil to be moved are yet to be determined. Work is to be performed along Harrison Creek upstream of the confluence of Ptarmigan Gulch. The construction work will be contracted using American Recovery and Reinvestment Act (ARRA) funding.

- **Mine Reclamation Evaluation: Mine Reclamation Evaluation:** In a separate effort, BLM staff are evaluating the effectiveness of the post-mining reclamation effort described above. In 2008, staff inventoried about one mile of lower Harrison Creek that has not been disturbed by mining. This undisturbed section of Harrison Creek will function as the study control and will provide insight into the capability of the system. Parameters evaluated included: stream channel morphology, streambank stability, riparian condition and trend, fish density, aquatic habitat composition, and water quality. In 2009, these same parameters were evaluated over a one mile segment of Harrison Creek upstream of Ptarmigan Gulch.



Fishery biologists evaluate the effectiveness of mining reclamation on Harrison Creek.

2. Recreation Facilities, Roads, and Trails Conditions

a. Overview

i. Overall condition of physical facilities, including roads and trails:

- Pinnell Mountain National Recreation Trail: survey of trail corridor was completed in 2009. Overall, trail condition is good with some sections needing additional maintenance (see ARRA projects.)



Hikers explore the geologic features near the Pinnell Mountain National Recreation Trail in the North Steese Unit.

- 4 waysides with facilities including vault toilets, informational panels and interpretive panels: good condition.

- Central Field Station: located in Central, Alaska, 127 miles from Fairbanks. The station provides housing during site visits and serves as a local staging area and warehouse for field work. The facility includes a bunk house/cabin, workshop, and storage sheds. The field station is used primarily from May through October. Near the end of the field season in FY2009, BLM personnel removed flooring and cabinets that contained hazardous materials in the main bunkhouse/cabin. Prior to the start of the field season in 2010, a new floor and cabinets will be installed.
 - Fryingpan Creek Road (FAMS#35878), a primitive road, is in good condition within the boundaries of the Steese NCA except for the last mile into the mine site which is impassable to standard four-wheel drive vehicles.
- ii. Asset Business Plan (ABP):
- All assets in the SNCA are included in the ABP.
 - The ABP does not allow for reporting this data for the NCA alone as all assets in the field office are lumped together. After correcting for the limitations of the system in determining the asset priority index, there is one asset in the SNCA in quadrant 4 (adequate condition, low priority) and five in quadrant 2 (poor condition, high priority.) These assets are all associated with the Central Administrative Site. An ARRA project will replace two of the assets and the BLM will correct the deficiencies in the other three as annual maintenance funding and time allow.
- b. Construction: No construction projects were conducted in 2009.
- c. Maintenance
- Field Office staff performs all maintenance associated with the recreation sites. The Alaska Fire Service performs the maintenance of the Central Field Station.
 - With deferred maintenance funding and ARRA funds, most of the major maintenance work will be completed.
 - Facilities in this unit are vandalized more often than other facilities in the district.
 - Annual maintenance funds are not adequate. Additional funds of \$15,000 would allow for the hiring of a seasonal maintenance worker to care for these facilities.
- d. Signage
- The SNCA Sign Plan was finalized in 2009.
 - Staff attempted to install portal signs but due to bedrock near to the surface, a new base design is needed. These portal signs will be installed in 2010 as other workload allows.

3. Outreach, Environmental Education, Interpretation, and Volunteers

a. Outreach

- The SNCA website is one of the primary sources of information for the public. http://www.blm.gov/ak/st/en/prog/nlcs/steese_conserv.html
- There are four information kiosks at highway waysides at access points to the NCA.
- Interpretation panels are located at Eagle Summit and Upper Birch Creek waysides.
- Brochures include *Birch Creek National Wild River*, *Pinnell Mountain National Recreation Trail*, *Eagle Summit – Window to the Midnight Sun* and *The Steese and Elliott Highways Travel Guide*.

b. Visitor Centers: There are no visitor centers associated with the unit.

c. Environmental Education: A *Leave No Trace* presentation was given to several classes of sixth graders for USFWS Outdoor Days.

d. Interpretation

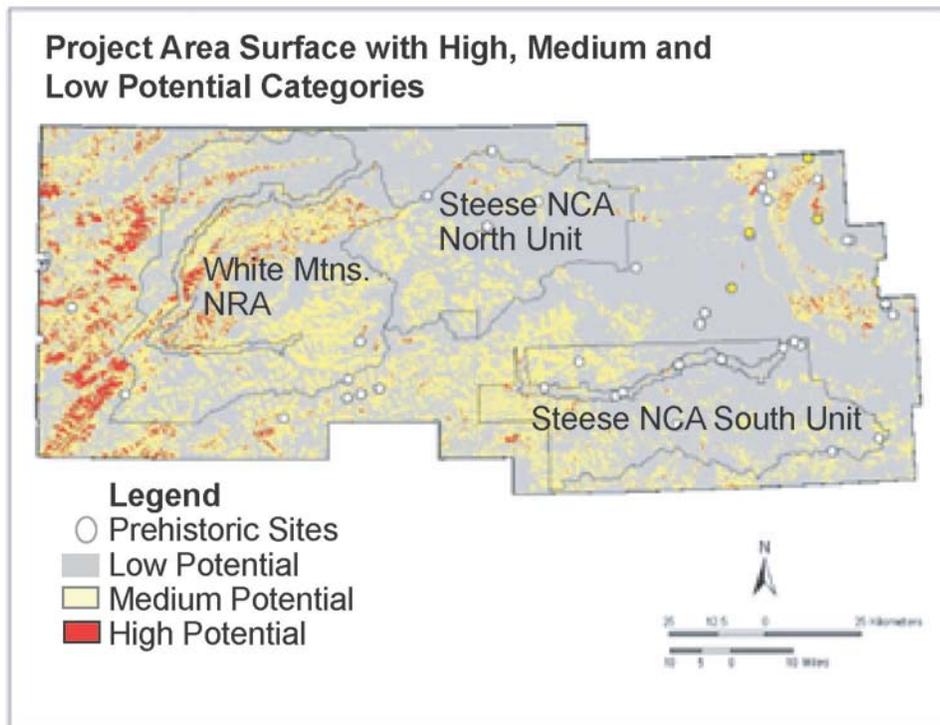
- Eleven wayside exhibit panels at two highway sites in the SNCA interpret the ecosystems and natural phenomena encountered by visitors to the area (alpine tundra, local plants, and geology). Panels on the midnight sun, migratory birds, and caribou migration were vandalized in 2008 and need to be re-fabricated.

e. Volunteers: A hosted worker with GeoCorps and Student Conservation Association each volunteered over 500 hours conducting route inventories and assisting with facilities maintenance and recreation visitor services program.

4. Science Projects from FY2009

• **Archaeology GIS Modeling Project**

The BLM contracted with the University of Alaska Fairbanks Anthropology Department to produce a predictive GIS model for prehistoric archaeological sites for an area covering the Eastern Interior Field Office, including the NCA. This model produced maps that show which areas have a higher and a lower potential for prehistoric and historic Alaska Native site recovery. This model has been useful for the new EIRMP/EIS planning effort. In 2010, staff will ground-truth the model.



A map produced from the Archaeology GIS Modeling Project shows areas of high, medium and low potential for containing archaeological sites.

- **Caribou Monitoring: *Partnership Project***

Two caribou herds occupy the Steese NCA and White Mountains National Recreation Area (NRA.) The White Mountains Caribou herd resides year-round in the White Mountains and North Steese Unit, while the much larger Fortymile Herd seasonally occupies the South Steese Unit. The Fortymile Herd is one of the more important caribou herds in the state for both sport and subsistence harvest and has been the focus of an international collaborative team aimed at recovery of the herd. The Fortymile herd was once estimated to number over half a million animals, and the entire herd annually calved in the White Mountains NRA and/or Steese NCA. The herd declined to a low of approximately 6,500 caribou in the mid-1970s, and the latest estimate puts the population at 39,000. The monitoring from this project aids in identification of important seasonal habitats. The two herds have been overlapping in range to an increasing extent the last few years, complicating harvest management and requiring increased monitoring to prevent excess harvest of either herd. In addition, the BLM has provided funding through a cooperative agreement with the Alaska Department of Fish and Game (ADFG) to support population monitoring of the Fortymile herd. The agreement aids in managing the Federal subsistence hunt, including emergency closures.

In 2009, a small portion of the Fortymile herd wintered in the White Mountains NRA and adjacent portions of the North Steese Unit for the first time in recent years. In late winter, approximately one-third of radio-collared White Mountains caribou, following Fortymile caribou towards their calving grounds, moved far south across the Steese Highway for the first time since monitoring began in 1982. All radio-collared White Mountains caribou returned prior to the calving period.

The long-term data provided by these monitoring projects was utilized to map seasonal distributions of the White Mountains and Fortymile caribou herds. Distributions were mapped using kernel density methods that display “contours” of caribou density. This information was used to formulate management alternatives for the EIRMP/EIS, including using quantitatively derived maps for Areas of Critical Environmental Concern (ACEC) proposals.

In addition to aerial surveys in FY2009, BLM worked with ADFG to conduct a detailed analysis of long-term data on seasonal distribution of the Fortymile caribou herd. A comprehensive report will be published in FY2010.

- **Dall Sheep Study: *Partnership Project***

In 2008, the BLM and partners (USFWS, ADFG, NPS) concluded a four-year study of Dall sheep in the Steese NCA and the White Mountains NRA. The extensive information available from this study was utilized to create maps of Dall sheep distribution (including movement corridors) and formulate management decisions for the EIRMP/EIS RMP. The maps were used in formulating ACEC boundaries. A long-term cooperative annual aerial sheep census was partially, but not fully, completed in FY2009 due to poor weather conditions.

5. Partnerships

There are several Partnership Projects described above in the Science Section. These are identified after the title.

6. Planning and Business Practices

a. Planning. The Eastern Interior Field Office is currently working on the EIRMP/EIS for the field office and adjoining lands including 6.7 million acres of BLM-managed land. Of this, we expect to retain about 5.8 million acres in long-term BLM management.

- This will replace several existing plans, including the SNCA RMP of 1986.
- There will be four Records of Decisions (ROD) with the RMP, including a separate ROD for the NCA.
- The Draft RMP/EIS is scheduled to be published in March 2010. The public comment period is scheduled to be April, May, and June, and we are scheduled to publish the Proposed RMP/EIS in October 2010 and sign the Records of Decision in June 2011.
- Major issues in the NCA include:
 - Opening the SNCA to mineral location: The Alaska Native Claims Settlement Act (ANCSA) closed lands in the SNCA to disposal and appropriation under public land laws, including mining and mineral leasing. The withdrawals kept the lands unencumbered for selection by ANCSA corporations, and prevented the creation of new third-party interests that would interfere with land conveyance. The withdrawals also served to give the BLM time to study and classify the lands. As the purpose of these withdrawals has been met, we will be considering lifting these withdrawals in the SNCA to allow for new mineral location.
 - OHV designations and access.
 - Improving and preserving water quality, particularly in the Birch Creek National Wild River.

b) American Recovery and Reinvestment Act (ARRA) of 2009. Projects undertaken with ARRA funds and their status:

- Lower Birch Creek Wayside: Funds will be used to resurface the road and parking pad, bring the access road up to design standards, provide accessible comfort station, and install interpretive panel and portal sign. Status: NEPA completed, design completed, contracting documents have been sent to procurement.



A canoer prepares to leave the Birch Creek NWR after a 5-day float. Waysides at the put-in and take-out points provide parking, information and restrooms for boaters.

- Steese NCA Comfort Stations: Replace five comfort stations to meet accessibility standards. Status: NEPA completed, design completed, contracting documents have been sent to procurement.
- Pinnell Mountain National Recreation Trail: Replace existing planking along two miles of the 27-mile-long trail. Status: NEPA completed, materials purchased and bundled for transportation. Work will be completed in 2010.
- Great Unknown Trail: realign existing fall-line motorized travel route out of a watercourse to a sustainable grade, low-speed contour trail to access hunting and recreation areas via vehicles with a 1,500 pound or less gross vehicle weight rating. Status: NEPA completed, contracting documents have been sent to procurement.



Biologist Jim Herriges collects plant samples to help in preparation of an Environmental Assessment for the Great Unknown Trail ARRA project.

- Harrison Creek Reclamation: Harrison Creek is a major tributary to Birch Creek National Wild River located in the Steese National Conservation Area. The drainage was extensively placer mined for gold since the late 1890's and some areas that were abandoned were not fully reclaimed. This project is Phase 4 of an ongoing effort to reclaim Harrison Creek and reduce the amount of inorganic sediment eroding from the stream channel while allowing anadromous and resident fish populations to expand and colonize previously mined areas. In this phase approximately 1.1 miles of stream channel and associated floodplain in the Harrison Creek watershed will be reclaimed. The project also includes hazardous and solid waste removal along Squaw Creek and Ptarmigan Gulch, tributaries of Harrison Creek. Status: NEPA completed, procurement is ongoing.