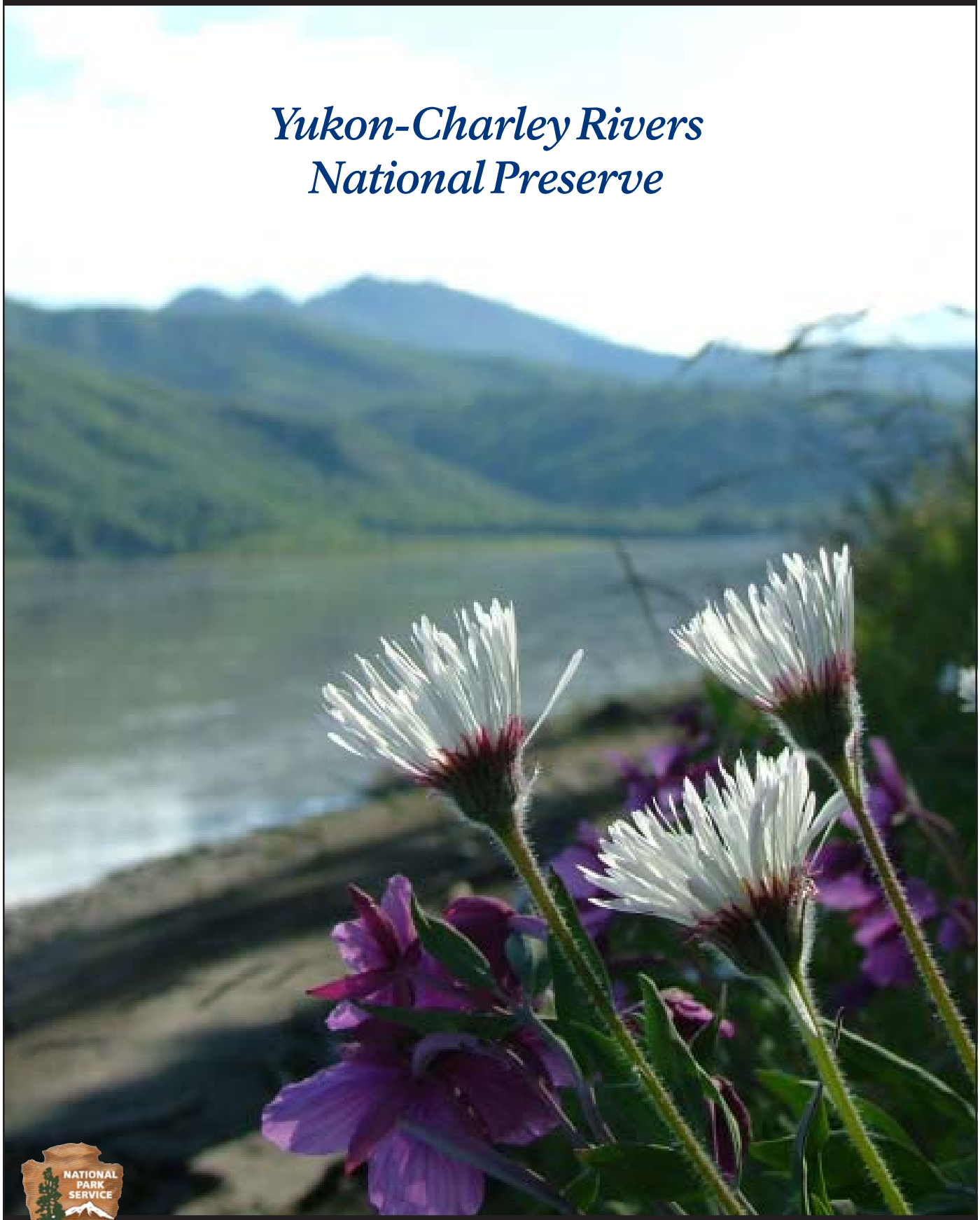
Annual Report 2006

Yukon-Charley Rivers National Preserve



National Park Service
Department of the Interior

Friends floated and camped along the Yukon River from Eagle to Circle.
"The rangers stopped and checked on us ... to see if we were OK,
and if there was anything they could do to help us.
They were most eager to answer the dozens of questions we asked them.
Also, it was very comforting to know they were
ready, willing and able to help us if the need arose."

J. Dale Lowry
visitor from Talladega, Alabama

Message from the Superintendent

Just a week ago, I joined the Preserve staff volunteering at Slaven's Roadhouse on the Yukon-Quest International Sled Dog Race trail. One hundred sixty miles of this 1,000-mile wilderness classic travels through the heart of Yukon-Charley Rivers National Preserve. In recent years, Slaven's Roadhouse has become a favorite shelter for teams that reach this remote historic structure on the Yukon River.

Typical mid-February weather greeted us and the mushers, with beautiful clear skies and evening temperatures dipping to 50 below. We were comfortably accommodated in the restored roadhouse despite the cold outside, and I began remembering the nearly 20-year history of restoration work that has occurred within the Coal Creek Historical District. Starting with the roadhouse, the Preserve's second superintendent, Don Chase, and historical architect Steve Peterson began the restoration process. Over the course of 20 years, bit by bit, more than 25 buildings were fully restored and are now being used by the public, educational groups, scientists and National Park Service staff. This effort did not require a large expenditure of funds, but rather a steady commitment to the project from many employees, volunteers and local residents. Much of the actual restoration was conducted by local residents of Eagle and Circle whose families and friends are part of the area's history. Their dedication to and creativity in working and solving problems in this remote environment were key to the final completion of the restoration effort.

This summer, nearly 40 residents from Eagle traveled to Coal Creek to celebrate and dedicate the historical district to their families who lived and worked in this area for decades (see story on page 22). Special thanks go to the dedicated individuals who helped preserve these facilities and the history of the area for the future enjoyment of all.

I am pleased to present this 2006 Annual Report for Yukon-Charley Rivers National Preserve. The annual report, a collaborative effort by the staff for six years, represents many of the diverse programs crucial to managing the National Preserve. Special thanks go to all who contributed articles to this report, but especially to Donna DiFolco, who has organized, designed, edited and been the leader for this annual tradition since its inception.

Sincerely
Dave Mills
Superintendent
Yukon-Charley Rivers National Preserve
February 2007

Purpose and Significance

Yukon-Charley Rivers National Preserve protects 115 miles of the 1,800-mile Yukon River and the entire Charley River basin. Rustic cabins and historic sites are reminders of the importance of the Yukon River during the 1898 gold rush. Paleontological and archeological sites add much to our knowledge of the environment thousands of years ago. Peregrine falcons nest in high bluffs overlooking the river, while rolling hills that make up the Preserve are home to an abundant array of wildlife. The Charley, a 100-mile wild river, is considered to be one of the most spectacular rivers in Alaska.

Purpose of Yukon-Charley Rivers National Preserve

- Maintain environmental integrity of entire Charley River basin, including streams, lakes, and other natural features, in undeveloped natural condition for public benefit and scientific study;
- Protect habitat for and populations of fish and wildlife, including but not limited to peregrine falcons and other raptorial birds, caribou, moose, Dall sheep, grizzly bears, and wolves;
- And in a manner consistent with foregoing, protect and interpret historical sites and events associated with the Yukon River gold rush, and geological and paleontological history, and cultural prehistory of area; and
- Protect, conserve, and interpret natural and cultural resources of the Preserve while allowing for appropriate human uses in a manner that provides for similar opportunities for future use and enjoyment.

Significance of Yukon-Charley Rivers National Preserve

- An internationally significant assemblage of diverse geological and paleontological resources—unusually complete—provide at least a 600-million-year record stretching nearly back to the Precambrian era.
- The area between Nation, Kandik, and Yukon rivers is postulated to be a portion of the North American plate that has escaped deformation from geological forces, remaining geologically and paleontologically intact. Some of the oldest known microfossils have been found in this area.
- The entire Charley River watershed is protected in its undeveloped natural condition.
- The Preserve hosts one of the highest density populations of nesting American peregrine falcons in the United States.
- Portions of the Han and Kutchin Athabaskan traditional homelands lie within the Preserve.
- Sites preserving activities and events of regional significance associated with the gold rush era are present and exemplified by bucket dredges, mail trails, trapper's cabins, boats, roadhouses, water ditches, and machinery.
- The Yukon River is the largest natural, free-flowing river in the National Park System.
- Large areas within the Preserve may represent an unglaciated refugium for endemic floral and faunal communities.

Yukon-Charley Rivers National Preserve

National Park Service
U.S. Department of the Interior

Yukon-Charley Rivers National Preserve lies in eastern interior Alaska, bordering Yukon Territory, Canada. The Taylor Highway will take visitors as far as Eagle, where the Preserve's field office and Visitor Center are located. Travellers into the Preserve typically float the Yukon River, or charter an airplane to fly into the upper Charley River. Visitors are encouraged to check in at the office in Eagle to file a travel plan prior to their trip.

Within the Preserve, NPS staff maintain facilities, including a public use cabin, at Coal Creek Camp, which also serves as a base for many resource projects. At Slaven's Roadhouse on the Yukon, visitors may enjoy learning about the area's rich mining history.

Table of Contents

Message from the Superintendent....3
Purpose and Significance of Yukon-CharleyRivers National Preserve....4
Map of Yukon-Charley Rivers National Preserve....5
Performance and Results Section....7-22
Preserve Resources....7-19
Public Enjoyment and Visitor Experience....20-22
Organizational Effectiveness....22
FY 2006 Financial Summary....23
Preserve Organization....24

For more information, contact us:

Yukon-Charley Rivers National Preserve
4175 Geist Road
Fairbanks, Alaska
99709

(907)457-5752
www.nps.gov/yuch

Staff Contributors
Dave Mills, Superintendent
Robyn Burch, Chief of Administration
Fred Andersen, Subsistence Manager
Melanie Wike, Wildlife Biologist
John Burch, Wildlife Biologist
Jim Lawler, Wildlife Biologist
Amy Larsen, Aquatic Ecologist
Jeff Rasic, Archeologist
Dave Krupa, Cultural Anthropologist
Andrew Ruth, Fuels Technician
Maggie MacClusky, CAKN Monitoring Coordinator
Pat Sanders, Interpretive Ranger

Special Contributors
Craig Gardner, Xi Chen, Kalin Kellie and Audrey Magaun contributed to the report on wolverine habitat parameters.

Editing and Layout
Donna DiFolco, Cartographic Technician

Photos
by the National Park Service, unless noted otherwise

Cover photo:
Fleabane and fireweed blossoms grace the bluffs above the Yukon River in Yukon-Charley Rivers National Preserve during the Peregrine Falcon survey in June.

Printed on Recycled Paper

Preserve Resources

Natural and cultural resources and associated values at Yukon-Charley Rivers National Preserve are protected, restored and maintained in good condition and managed within their broader ecosystem and cultural context.

Prickly Rose (*Rosa acicularis*) is a common shrub in the wooded hills of Yukon-Charley Rivers National Preserve.

NPS Archeologist Andy Tremayne uses a GPS to record the location of a stone hunting blind off the Charley River.

Central residents Jim Wilde and Fred Schenk check the net during the 2006 King Salmon run on the Yukon River.

This hand made ulu of Eagle Village resident Riba DeWilde is used to cut fish, moose and other wild meat strips for the smoker.

Circle resident Dennis Carroll completes construction of a new fishwheel before the 2006 King Salmon run.

Wolf tracks in the snow.

Long-term Goal: Archeological Sites: By September 30, 2008, 13% (5 additional, 30 total) of Yukon-Charley Rivers National Preserve's archeological sites listed in ASMIS (209) without accurate condition assessment are visited, are in good condition and ASMIS updated.

Annual Goal: By September 30, 2006, 9% (20 out of 222, 5 additional) of Yukon-Charley Rivers National Preserve's archeological sites listed in ASMIS (222) without accurate condition assessment are visited, are in good condition and ASMIS updated.
GOAL EXCEEDED

Sourcing of Archeological Obsidian

by Jeff Rasic

Artifacts have been found to derive from sources up to 320 miles away from Yukon-Charley.

Working with existing park collections, artifacts from the University of Alaska Museum, and new field collections, archeologists conducted geochemical analysis of several dozen obsidian artifacts from the Preserve. Obsidian is a volcanic glass that was used prehistorically to manufacture tools. Chemical signatures from artifacts can be correlated with source signatures to pinpoint the origin of an artifact. About 100 artifacts from Yukon-Charley have been characterized so far and have been found to derive from the Batza Tena source on the Koyukuk River, some 320 miles from the Preserve, as well as the Wiki Peaks source in the Wrangell Mountains, a distance of 190 miles from Yukon-Charley. These data stand to show changing trade and travel patterns through time.

Above, a projectile point fragment from the Charley River basin. The background photo shows a view of the Kandik River in the Johnson Gorge.

Archeological Inventory on the Kandik and Charley Rivers

By Jeff Rasic

Preserve archeologists began the first of a 4-year archeological inventory that will span Yukon-Charley Rivers National Preserve. Work in 2006 focused on upland areas of the Preserve in the Kanidk and Charley River basins. A total of 36 new sites were identified and 15 known sites were revisited. An estimated 41,600 acres were surveyed at a reconnaissance level. Most sites were prehistoric stone tool scatters that date to the last few thousand years.

Monitoring Impacts of Forest Fire on Shallow Lake Ecosystems

By Amy Larsen

Forest fire has been the dominate disturbance in boreal forests since the last ice age. Not only does fire alter the composition and successional trajectory of terrestrial vegetation but it influences energy flows by altering thermal and biogeochemical cycling. Although a great deal is known about the affects of fire on vegetation, and to some degree on soils, little is known about how fire affects shallow lake ecosystems. In 2004 we had the unique opportunity to monitor the effects of wildfire on lake water quality in Yukon-Charley. We visited 7 lakes in the Edwards Creek burn within two weeks of fire cessation. Each lake was sampled for a small suite of chemical parameters and re-sampled in 2005. This study represents one of the few studies of lake water quality in the boreal forests of Alaska following fire. We found significant changes in lake water quality for total phosphorus (TP), total nitrogen, and dissolved organic carbon (DOC). We documented a 6.3 fold increase in total phosphorus. Total nitrogen increased approximately 30% and DOC more than doubled between sampling events.

These changes in water quality will likely impact the trophic structure and functioning of these ecosystems. Nutrient supplementation is frequently linked with increased primary production. Changes in DOC alter lake water color that can have resulting impacts on lake temperature, light penetration and evaporation rates. In 2007 we plan to revisit these lakes and monitor water quality and macroinvertebrates to assess trophic shifts. These data will provide essential insights on the affects of fire on shallow lake ecosystems.

We found significant changes in lake water quality for total phosphorus, total nitrogen, and dissolved organic carbon.

Nick Lisuzzo, biotechnican for Yukon-Charley Rivers National Preserve, sets up a weather station on a small lake in Yukon-Charley. These data are used with water column data to track the thermal profile of the lake.

Doug Wilder, data manager for the Central Alaska Network inventory and monitoring program, measures lake depths to create a bathymetric map of the lake and track changes in lake water level.

Alaska Eastern Area Fire Management Helicopter Operations

By Andrew Ruth

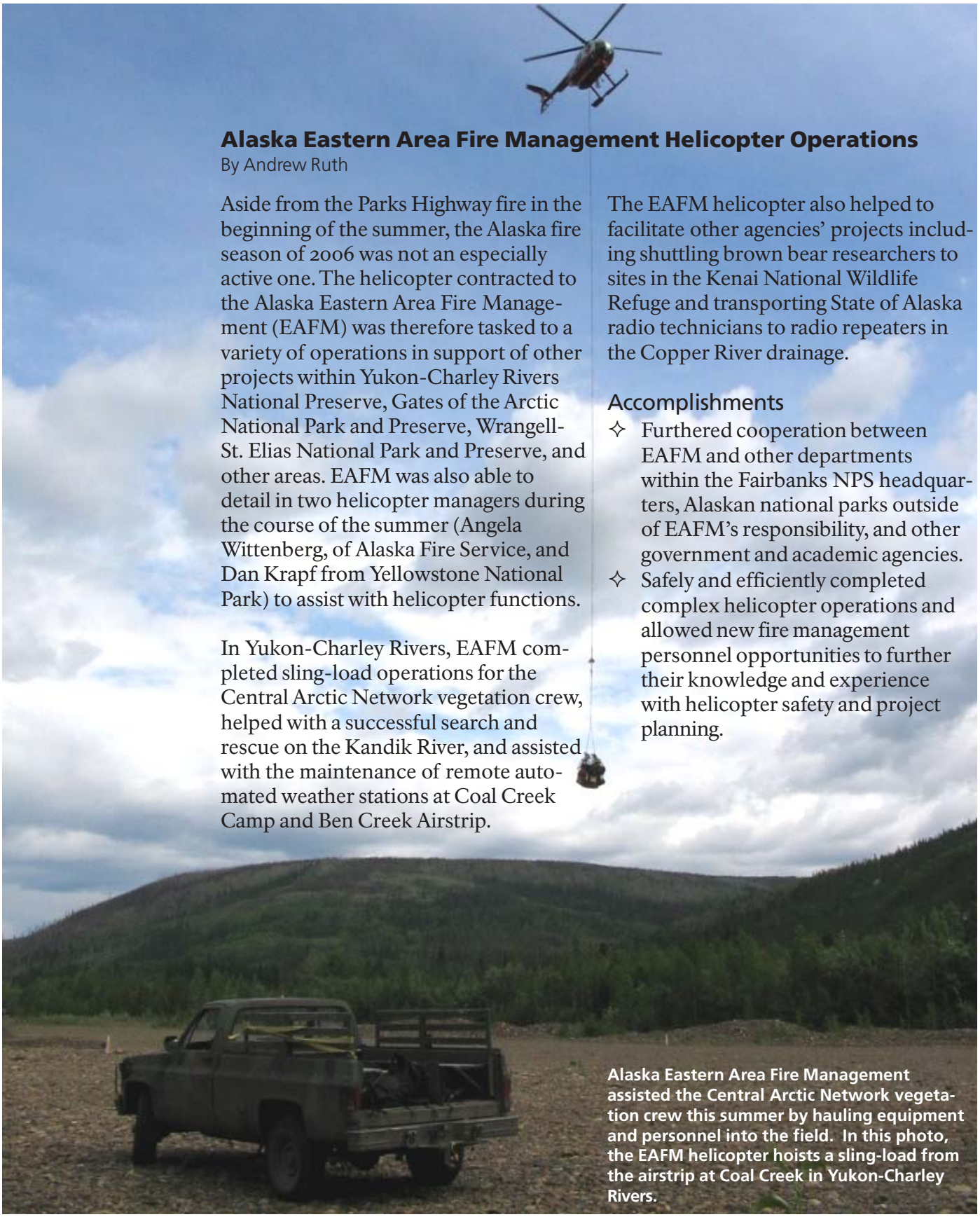
Aside from the Parks Highway fire in the beginning of the summer, the Alaska fire season of 2006 was not an especially active one. The helicopter contracted to the Alaska Eastern Area Fire Management (EAFM) was therefore tasked to a variety of operations in support of other projects within Yukon-Charley Rivers National Preserve, Gates of the Arctic National Park and Preserve, Wrangell-St. Elias National Park and Preserve, and other areas. EAFM was also able to detail in two helicopter managers during the course of the summer (Angela Wittenberg, of Alaska Fire Service, and Dan Krapf from Yellowstone National Park) to assist with helicopter functions.

In Yukon-Charley Rivers, EAFM completed sling-load operations for the Central Arctic Network vegetation crew, helped with a successful search and rescue on the Kandik River, and assisted with the maintenance of remote automated weather stations at Coal Creek Camp and Ben Creek Airstrip.

The EAFM helicopter also helped to facilitate other agencies' projects including shuttling brown bear researchers to sites in the Kenai National Wildlife Refuge and transporting State of Alaska radio technicians to radio repeaters in the Copper River drainage.

Accomplishments

- Furthered cooperation between EAFM and other departments within the Fairbanks NPS headquarters, Alaskan national parks outside of EAFM's responsibility, and other government and academic agencies.
- Safely and efficiently completed complex helicopter operations and allowed new fire management personnel opportunities to further their knowledge and experience with helicopter safety and project planning.



Alaska Eastern Area Fire Management assisted the Central Arctic Network vegetation crew this summer by hauling equipment and personnel into the field. In this photo, the EAFM helicopter hoists a sling-load from the airstrip at Coal Creek in Yukon-Charley Rivers.

Fire Management Hazard Fuels and Fire Ecology Projects

By Andrew Ruth

When not involved with Lower 48 fire assignments and helicopter operations, the Alaska Eastern Area Fire Management (EAFM) crew was responsible for hazard fuel reduction around cultural resource sites and fire effects plot monitoring within Yukon-Charley Rivers National Preserve and Wrangell-St. Elias National Park and Preserve.

Thinning of flammable vegetation was accomplished around four sites in Yukon-Charley Rivers and included the Ben Creek remote automated weather station, Ben Creek airstrip, and Ben Creek and Fourth of July Creek cabin complexes. A number of personnel were involved.

The EAFM crew assisted with monitoring four fire effects plots in the Coal Creek drainage which burned in the 2004 Woodchopper fire.

Accomplishments

- Facilitated the protection of four cultural resource sites in Yukon-Charley Rivers from wildfire through hazard fuels reduction.
- Collected fire effects research data which will be used to validate vegetation successional trajectories following wildfires.

EAFM Team Members Assist with "Lower 48" Fires

By Andrew Ruth

In sharp contrast to the 2006 Alaskan fire season (where about 270,000 acres burned), the Lower 48 experienced an especially busy fire season, with approximately 9.4 million acres burned. This provided an opportunity for a number of Alaska Eastern Area Fire Management (EAFM) personnel to serve on fires in various capacities outside of Alaska.

Accomplishments

- Participated in suppression of wildfires and management of wildland fire-use fires in the Lower 48 with a combined total of 82 personnel days.
- Worked towards completion of individual taskbooks (i.e. ICT 4, FEMO, and EQPM) necessary for firefighting (suppression, fire-use, prescribed, and emergency response) positions.
- Fostered interagency collaboration through participation in interagency Type II crews, a Forest Service fire use module, and an Alaska Department of Forestry engine crew.

At left, an Alaska interagency Type II suppression fire crew works in Central Oregon conducting burn-out operations.

The National Park Service contributes to knowledge about natural and cultural resources and associated values; management decisions about resources and visitors are based on adequate scholarly and scientific information.

Long-term Goal: Natural Resources. By September 30, 2008, 14 of 14 natural resource inventories or research projects (annual or final report) ("obtain or develop natural resource information") for Yukon-Charley Rivers National Preserve that are identified in a Resource Management Plan, General Management Plan, or CAKN Phase III Document are completed.

Annual Goal: By September 30, 2006, 2 additional (10 total) natural resource inventories or research projects (annual or final report) ("obtain or develop natural resource information") for Yukon-Charley Rivers National Preserve that are identified in a Resource Management Plan, General Management Plan, or CAKN Phase III Document are completed.
GOAL ACHIEVED

Peregrine Falcon Monitoring Continues for 31st Consecutive Year

By Melanie Wike

This year marked the 31st consecutive year that American Peregrine Falcons were monitored within Yukon-Charley Rivers National Preserve in the upper Yukon River corridor. The population within the upper Yukon corridor is believed to be one of the densest populations in North America, and also has the longest and most complete recorded datasets for the species. The number of occupied territories within the study area has been steadily increasing since the species' near extinction in the early 1970's due to DDT contamination. Fifty-four occupied territories were observed in 2006, nearly a 5-fold increase since 1975. Number of nestlings, though variable among years, has also increased from 17 in 1975, to 70 in 2005 and remained high at 67 in 2006.

Recent contaminants analyses of Peregrine Falcon eggs from Yukon-Charley suggest that mercury is currently at levels that may affect reproduction, and trends suggest that mercury levels may be increasing. Mercury is a persistent compound which bio-accumulates at high trophic levels causing toxic effects similar to DDT. Additionally, DDT and other pesticides are still being used in wintering grounds in South America, which may cause continued risk to the population. In response to these threats,

The population within the upper Yukon corridor is believed to be one of the densest populations in North America, and also has the longest and most complete recorded datasets for the species.

Biologist Angela Matz (USFWS) and Steve Ulvi (NPS) observe an American Peregrine Falcon aerie along the Upper Yukon River corridor, July 2006.

addled eggs and nestling feathers are collected annually to monitor population health. In 2006, two addled eggs and nestling feathers were collected from two aeries. In addition, a cracked egg-shell fragment and two shed adult feathers were collected for genetic analysis.

Accomplishments in 2006:

- 54 active aeries were visited in 2006
- 67 nestlings were counted throughout the Upper Yukon study area by July 18, 2006
- 2 addled eggs and nestling feathers from 2 aeries were collected for continued contaminants analyses
- Egg-shell fragments and shed feathers from 2 adults were collected for genetic analyses

Nestling feathers of American Peregrine Falcons are collected from aeries to assess contaminants accumulation on the breeding grounds along the Upper Yukon River.

USFWS performs analyses on addled American Peregrine Falcon eggs collected from unsuccessful aeries to assess levels and types of contaminants accumulated on the wintering grounds.

Preliminary Results Indicate Decrease in Wolf Population

By John Burch

This marks the 13th year the wolf population has been monitored in Yukon-Charley Rivers National Preserve (YUCH). In 2005 and again in 2006 the Central Alaska Network (CAKN) partnered with YUCH to accomplish that monitoring.

From 2002–2004 wolf monitoring in YUCH received less funding due to the need to get information on other taxa, such as neotropical migratory birds. This, combined with an unusual attrition of radio-collared wolves, left the project with only two functioning radio-collars by December 2005. However, by the combined financial contributions of CAKN and the Park in 2006, we were able to capture and radio-collar 21 additional wolves in 10 packs and bring the project back 'on-line.' Unfortunately, two of these packs appear to spend very little time in the Preserve and cannot be considered 'Preserve Packs.' Over 80% of total funds were spent snow-tracking, searching for, and capturing new wolves in or near the Preserve boundary. From this effort we have learned that some historic packs have disappeared and their old home range usurped by two or more newly formed pairs, whereas other home ranges have shifted geographically. There appear to be at least two additional wolf packs that use substantial amounts of the Preserve that we were unable to find and capture; they will be a top priority to find, radio-collar, and count this coming winter.

A preliminary (Fall 2006) population estimate of 31 wolves in the Preserve (Fig. 1) indicates a decrease in the Preserve's wolf population. A comparison of mean pack size through time also indicate a drop in wolf numbers from last fall (Fig. 2), although the Fall 2006 estimate will likely increase as we get better pack counts in October and November. So far this fall, we can

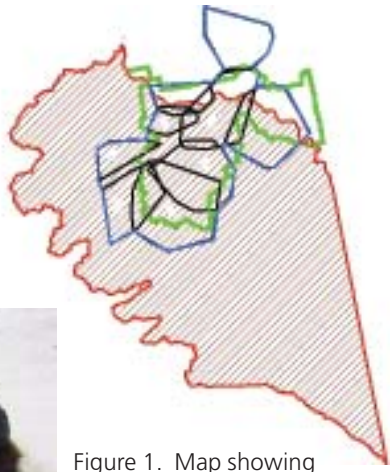
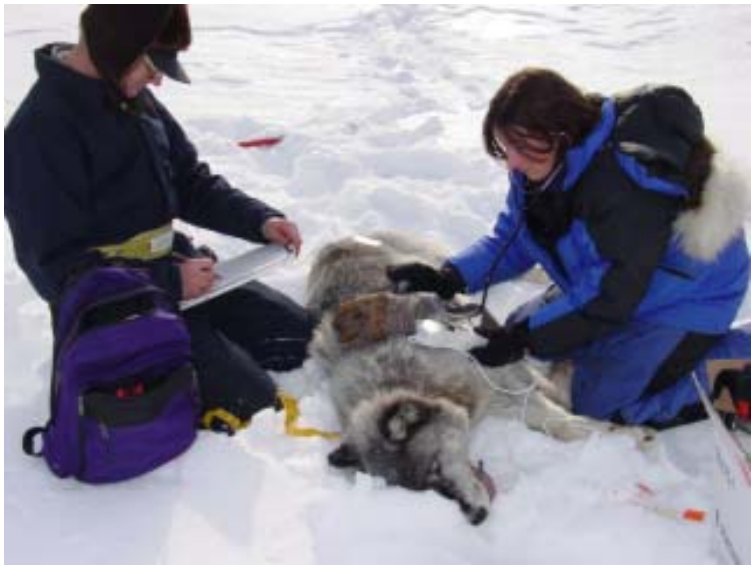


Figure 1. Map showing wolf population data from January 1 through October 1, 2006, in Yukon-Charley Rivers National Preserve (green) in relation to individual wolf pack home ranges (black) and all wolf packs' home ranges combined (blue). The large area outlined in red is the current wolf control area boundary.



NPS wildlife biologist John Burch and UAF veterinarian Cheryl Rosa collect vital signs data (temperature, pulse, respiration rate, and blood oxygen level) using a pulse oximeter on a radio-collared wolf.

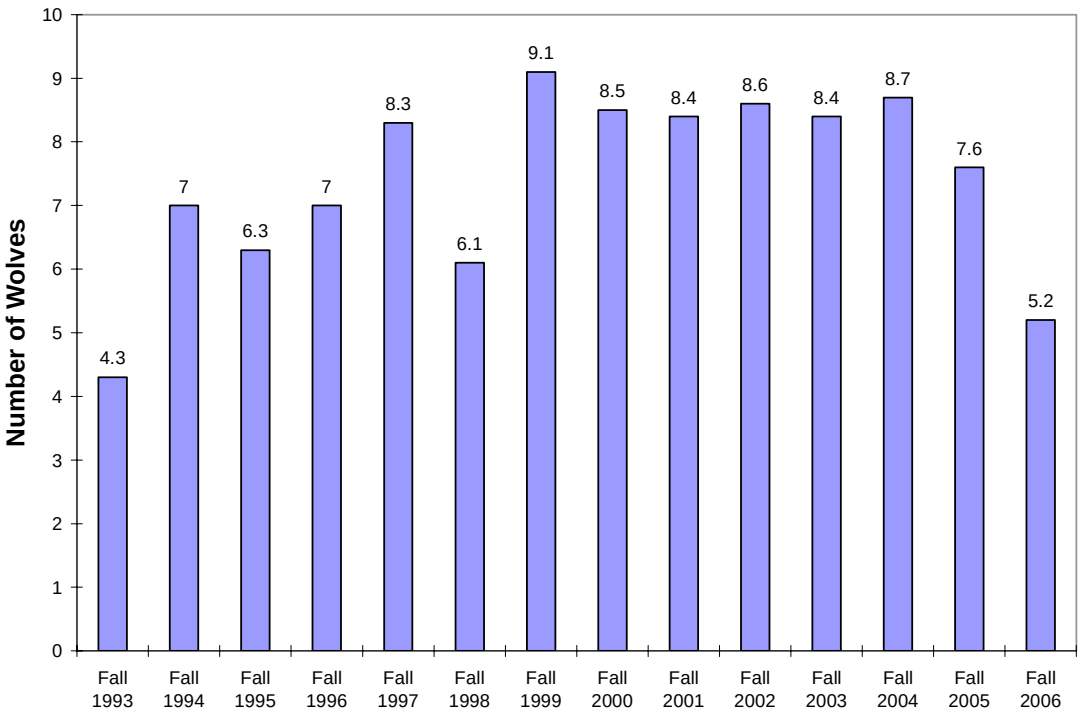


Figure 2. Mean pack sizes for wolves in Yukon-Charley Rivers National Preserve following the Fall count. The trend indicates an overall drop in wolf numbers for Fall 2006. The number will likely increase as we get better counts on the packs this winter.

Beginning September 1, 2006, the aerial wolf control area was greatly expanded to surround the entire Preserve south of the Yukon River.

confirm at least 13 pups were produced in 3 Preserve packs and have survived to mid-September. One other pack appears to have lost their pups, 3 packs did not produce pups, and 2 others remain unknown so far. GPS radio-collars with an ARGOS data download continue to make YUCH's wolf population monitoring more accurate, consistent and efficient.

Wolf management in the area of Yukon-Charley Rivers National Preserve and the entire Fortymile region has been controversial and turbulent for many decades. Starting in January 2005, aerial wolf control occurred right up against a small portion of the Preserve boundary killing 5 wolves from one Preserve pack; 6 more from a different Preserve pack were killed in November 2005. Beginning September 1, 2006, the aerial wolf control area was greatly expanded to surround the entire Preserve south of the Yukon River (Fig.1). This winter (2006 – 2007) will be pivotal to YUCH's wolf population as State aerial wolf control has the potential to reduce the Preserve's wolf population by 80% or more. Because of the wolf monitoring program we know all packs of wolves living in the Preserve routinely travel well out side the Preserve's boundaries and into the areas of the current aerial wolf control. The information gathered by this study and CAKN will be instrumental in allowing NPS managers to make informed science-based decisions regarding wolves and wolf management in Yukon-Charley Rivers National Preserve.

Central Alaska Network Implements Vital Signs Monitoring

By Maggie MacCluskie

The 2006 field season marked the first year of official implementation of the Vital Signs Monitoring program for the Central Alaska Network (CAKN). The focus of the CAKN monitoring program during the first three years of implementation is to establish monitoring for the first 11 of 37 vital signs of the program. Of the 11 initial vital signs, seven will be conducted in Yukon-Charley Rivers National Preserve (YUCH) and include climate, snow pack, vegetation structure and composition, shallow lakes, peregrine falcons, moose and wolves. We are phasing in the field effort, the first year being a pilot effort for which we choose sampling locations to make logistics relatively simple. In subsequent years we then conduct sampling in whatever manner is specified in the protocol for that vital sign.

The CAKN provides full support for the monitoring of climate, snow pack, and vegetation structure and composition. For shallow lakes, peregrine falcons, moose, and wolves, the network and YUCH have a cost-sharing agreement such that the network and park contribute staff time and/or funds to the monitoring. Such an arrangement allows the network to monitor more vital signs than would be possible if the network provided sole funding to the program, and promotes the integration of the Vital Signs Monitoring Program with the resource programs of the network parks. (*Editor's note: See reports on shallow lakes monitoring, page _, peregrine falcons, pages 10-11, and wolves, page 12-13, in this Annual Report.*)

Climate Monitoring

The 15 new climate stations installed in 2004 in DENA, WRST, and YUCH have run virtually trouble free. However, there has been one glitch. The air temperature for the Upper Charley River station in YUCH read 58°F on June 14, but on June 15 it registered -40° F. A site visit on June 20th revealed that a bear had found that particular sensor and pulled the wire. All other sensors were working. Fortunately, the bear did minimal damage and since the annual maintenance trip was scheduled for June 19, data loss was minimal.

Vegetation Structure and Composition

Using one crew of three technicians, three new mini-grids were installed and measured in the boreal zone along the Yukon River. This effort included establishment of more than 60 new permanent vegetation monitoring plots. Data collection for the vegetation monitoring program was accomplished via remote field computing using Tablet PC's for electronic data entry in the field. This set of activities drastically reduced the time required for data entry and represents a major step forward for QA/QC for vegetation program data.

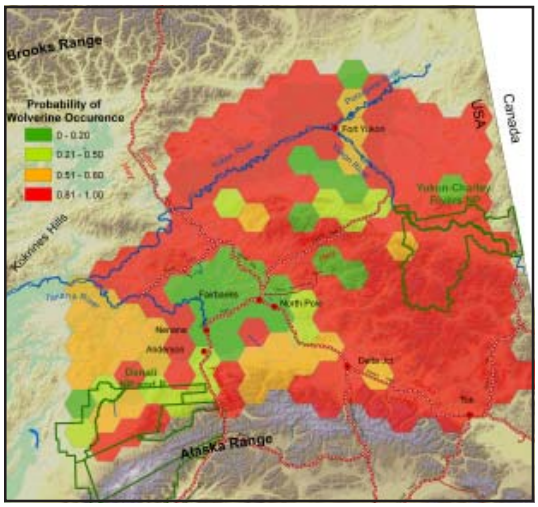
Monitoring vegetation structure and composition is one of seven vital signs being monitored in Yukon-Charley. Below, technicians install and measure three new mini-grids in the boreal zone along the Yukon River.

Identifying Key Habitat Parameters of Wolverines in Interior Alaska

By Craig Gardner, James Lawler, Xi Chen, Kalin Kellie and Audrey Magoun

Wolverines are found throughout interior Alaska but little is known about distribution patterns, densities, and habitat requirements. Scientific studies on wolverines in interior Alaska are nonexistent. As a result, management of wolverine in interior Alaska has been based on inferences from harvest data and incidental observations by biologists and trappers. Sole reliance on these sources of information for wolverine management is problematic as huge variation exists in the quality and quantity of information. The lack of empirical population and habitat data has hindered wildlife managers in past management and mitigation decisions.

In 2004 and 2006, the National Park Service, Alaska Department of Fish and Game, and the Wolverine Foundation investigated broad scale wolverine distribution and habitat requirements in interior Alaska using methodology developed in Ontario. We had two goals for this project: 1) test a technique for monitoring wolverine distribution in large remote areas; and 2) collect baseline ecological data on habitat use and inter-specific correlates for wolverine in interior Alaska.



This probability map shows the study area units (hexagons) and the prdicted occurrence of wolverine. Modeled results are depicted as 1 of 4 categories of probability of occcurrence in each hexagon: green indicates low probability, while red indicates high probability of wolverine.

Preliminary results indicate that wolverine presence was negatively correlated to wolves, snowmachines and the presence of human activity, and positively correlated to marten, caribou and rough terrain. Correlations among the covariates made it difficult to define a best model. The probability map indicated that wolverine were distributed throughout interior Alaska but certain regions of the study area had higher probabilities of containing wolverine than did others. Study units in the southeastern portion of the study area had consistently high probabilities of containing wolverines while those units around Fairbanks had a low probability of holding wolverine.

The identification of influential factors of wolverine presence provided by this study can help guide the management of this species. We plan to continue to refine our occurrence model in the upcoming year. The methodology we tested in this study provides a powerful tool for monitoring wolverine distribution in interior Alaska and would be useful in monitoring changes associated with disturbance.

Preliminary results indicate that wolverine presence was negatively correlated to wolves, snowmachines and the presence of human activity, and positively correlated to marten, caribou and rough terrain.

Traditional Ecological Knowledge of Upper Yukon Salmon Fishery

By Dave Krupa

Interview topics included observations about the stock status and health of the salmon runs, local harvest and processing techniques, and recommendations for better management of fisheries.

Research and interviews to document local knowledge and practices concerning the Yukon River salmon fishery continued during 2006. This year's interviews focused on Central and Circle area fishers. Central resident Laurel Tyrrell was hired to conduct the interviews, and Circle residents Jessica Boyle and Dennis Carroll provided additional assistance. Interview topics included observations about the stock status and health of the salmon runs, local harvest and processing techniques, and recommendations for better management of fisheries. The new interviews in Circle and Central help provide a more complete picture of local perspectives on this essential subsistence fishery. This project was funded by a generous grant from the Fisheries Information Service of USFWS.

Accomplishments:

- 16 Central and Circle area interviews were recordedalong with one additional interview in Eagle Village.
- An informational poster summarizing the results of 2005 interviews was developed. The poster proved to be very popular and informative and has since been reprinted for local distribution, both as a poster and as a laminated placemat.
- A total of 40 interviews with area fishers have been conducted for this project.
- All 40 interviews from both field seasons have now been transcribed and copies have been delivered to project participants for review and revision.
- Hundreds of still photographs have been generated using still capture software on the digital videos and are being used in the development of interpretive products such as a DVD sampler of local knowledge.
- Eagle and Eagle Village residents received a draft copy of the year one interim report for review and revision.
- The Draft final report is due February 1, 2007, with a Final Report to be completed by April 1, 2007.

Circle resident John Caroll fine tunes his fish wheel on the Yukon River.

TEK on Global Climate Change

Cultural Resources staff also assisted in contacting and inviting (former) Chief Isaac Juneby to serve as a traditional and local knowledge discussant on a panel on global climate change impacts at the 2006 Park Science Symposium held at Denali National Park and Preserve. Chief Juneby shared insights and observations gleaned from his lifelong dependence on the land and resources of the Upper Yukon River area.

Museum Collections Increase

We catalogued 24 new museum specimens this year—a small number of archaeological artifacts and samples and a few ethnographic specimens—bringing the total number of items in our collections to 19,722. Our museum collections also contain archives, and ethnology, history, biology, paleontology and geology items, available for study to park staff, researchers and the public.

Young Salmon Surprise Biologists

By Fred Andersen

During the mid-1990's, Canadian fishery biologists working in the upper reaches of the Yukon River made a surprising discovery. They found large numbers of juvenile Chinook (king) salmon in small Yukon River tributaries which do not support spawning adult Chinooks. Until then, it was believed that young Chinooks stayed in the larger rivers after they hatched until migrating over 1,500 miles to the Bering Sea where they reside for 2-5 years. Not so.

Biologists now speculate that young king salmon gain a survival advantage by leaving their natal streams and seeking out smaller tributaries to rear in that are less densely populated by other juveniles.

Biologists from the US Fish & Wildlife Service and the NPS did preliminary field work in 6 streams in and near the Yukon-Charley Preserve last summer and found young-of-the-year Chinook salmon in every stream that was sampled.

Biologists have discovered that tiny Chinook salmon like this one rear in small tributaries, not large rivers, after they hatch.

Provide for the Public Enjoyment and Visitor Experience

Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of preserve facilities, services, and appropriate recreational opportunities.

Long-term Goal: Visitor Satisfaction. By September 30, 2008, 90% of visitors to Yukon-Charley Rivers National Preserve are satisfied with appropriate park facilities, services, and recreational opportunities.

Annual Goal: By September 30, 2006, 90% of visitors to Yukon-Charley Rivers National Preserve are satisfied with appropriate park facilities, services, and recreational opportunities.
GOAL EXCEEDED

If You're In Danger, Call A Ranger!

By Pat Sanders

There were several significant incidents this summer that involved cooperative efforts between the NPS Ranger staff and Alaska State Troopers. The season began with a call for assistance from a resident along the Yukon River whose home had been burglarized. The investigation by rangers in the area led to the discovery of several other burglarized properties and evidence of three suspects known to be within the boundaries of Yukon-Charley. Yukon-Charley, Wrangell St. Elias and Alaska State Trooper staff worked together to apprehend the three individuals and seize stolen property at a camp along the Yukon. All were successfully prosecuted for burglary, theft, firearms and wildlife violations.

A local resident and his dog were very happy to see the ranger and helicopter come to his rescue after spending three days eating dough balls and rhubarb. The victim had become stranded at the Washington Creek Cabin and had tried to signal passing planes by igniting flares. After intial search efforts were unsuccessful, additional investigation refocused the search on the Washington Creek area, resulting in a happy ending.

Ranger staff had a busy and productive hunting patrol season, contacting many resident and out-of-state hunters. The boat patrols were supplemented by aerial support from ranger/pilots from other parks. Rangers reported good compliance and many positive visitor contacts this season and also addressed several wildlife violations in the Preserve.

The number of river travelers was slightly lower than the previous years but the lack of fires or smoke in the area made river travel much more enjoyable…for visitors as well as staff!

A hunter was seriously injured when his boat hit a gravel bar on the Yukon River near Slaven's Roadhouse (photo below). Rangers responded overland and by boat to provide emergency medical care and extrication. A night-time medi-vac was accomplished by boat to a MAST helicopter dispatched from Ft. Wainwright.

Park visitors and the general public understand and appreciate the preservation of parks and their resources for this and future generations.

Long-term Goal: Visitor Understanding. By September 30, 2008, 80% of Yukon-Charley Rivers visitors understand the significance of the Preserve.

Annual Goal: By September 30, 2006, 80% of visitors will understand the significance of the Preserve.
GOAL EXCEEDED

Students Shout YEA! Over Education Workshop

By Pat Sanders

Nineteen students from Eagle School and four home school students joined with teachers and park staff for a 3-day, 2-night education workshop held at the newly restored Coal Creek mining camp site. A vote was taken by the group to decide an appropriate name for the trip and Yukon Education Adventure (YEA!) was the chosen trip name.

Prior to the trip, students worked with park staff to create a waterproof survival kit. Students chose the contents of their kit and, along with park staff, studied the merits of each item they included. Along with the survival kit compilation, students studied bear management policies and bear/animal safety. Students also studied appropriate attire for wilderness travel.

Chaperones and students enjoyed the trip to Coal Creek and stops were made along the way to conduct experiments. Students collected data on fire activity and set fire plots to study vegetation and succession in areas newly and severely burned, moderately and lightly burned. Students also studied water quality, geology, paleontology and mining history. A highlight of the trip was the students' ascent of Slaven's Dome, a 2,100 ft. climb.

As part of the partnership between the Alaska Gateway School District and the National Park Service, the staff prepared meals in compliance with the new State standards for healthy diets for students and though s'mores were not eaten, marshmallows were allowed in moderation while ghost stories of Alaska were told around the nightly campfire. Students were assigned camp tasks and chores and they took pride in competing for the cleanest cabin prior to departure. Plans are already in the works to include an additional school in the 2007 trip.

Students search for aquatic invertebrates during the 2006 Yukon Education Adventure (YEA!) workshop held at Coal Creek Camp in Yukon-Charley Rivers National Preserve.

The trip was a testament to the growing, positive partnership between the Han Athabascan community, the City of Eagle residents, and the National Park Service.

History, Memories at Coal Creek

By Pat Sanders

Thirty four residents of Eagle, Eagle Village, Fairbanks and outlying communities, joined NPS staff to celebrate the restoration of Coal Creek Mining Camp. During the celebration, bunkhouses were named in honor of those people having longevity with the mining area. Among the descendents participating were a number of former residents at Coal Creek who lived at the Snare Creek Camp site in their youth. The memories and stories that were shared livened up the entire group and brought smiles to everyone. One such story was shared by a former Coal Creek resident who said that when he was a child, his dad took a very large nugget to the new owner of the mine and asked, "Is this what you are interested in?" The trip was a testament to the growing, positive partnership between the Han Athabascan community, the City of Eagle residents, and the National Park Service.

Group photo in front of the mess hall.

Ensure Organizational Effectiveness

The National Park Service uses current management practices, systems, and technologies to accomplish its mission.

Volunteers Make a Difference

By Pat Sanders

The volunteer program this year was a successful blend of talent and longevity in Yukon-Charley Rivers. Volunteers participated in activities ranging from painting and cleaning of historic sites to participating in community events. One long-time Eagle resident who volunteered her time in the visitor center was a highlight for many Holland America clients as she regaled the groups with tales of winters in cold, dark interior Alaska.

Amundsen Park in Eagle was renovated with the help of NPS volunteers. The effort strengthened the partnership between the National Park Service and the local community.

We are grateful for the more than 3,300 volunteer hours logged enhancing the many programs in Eagle and in the field. A particularly well received volunteer effort was provided to the community of Eagle. Employees volunteered to assist with renovation efforts at Amundsen Park in Eagle. Volunteers worked tirelessly to complete their assigned tasks to accomplish the renovation.

New Space Meets the Need of Fairbanks Staff

By Robyn Burch

The National Park Service staff in Fairbanks had the rare opportunity to help plan--from scratch--an efficient, modern new office. Our lease in the Al Ketzler building had expired, and after 20-some years, it was time to move. We had expanded from a small portion of the first floor to the entire level and had run out of room. We had no storage, curatorial, or lab space, only one small meeting room, and the IT server room was a coat closet. After determining our exact needs, GSA put out a bid for the construction of a new office and Jerry Sadler was given the bid.

We were extremely fortunate in that the owner and contractor both welcomed our involvement during the planning and construction of the new building. The regional IT staff helped us determine our needs and requirements for a server room and network infrastructure, and two NPS employees knowledgeable in curatorial requirements helped with the requirements for our curatorial space. Every staff member had a hand in helping to make this new office "ours."

Moving out of the old office and into a newly constructed facility was a huge undertaking and couldn't have been done at a busier time of year for much of the staff. With help from the committees established to organize our transition and many individuals that helped in the actual move process, we moved out of the Al Ketzler building, cleaned, moved into the new building and had offices up and running with phones and network connections in under two weeks!

With much of the old furniture excessed and the new furniture delayed, many staff made due by working on folding tables and out of boxes. When the furniture arrived, staff helped check in the furniture, put it in the right offices, and did all the finishing touches including printing photos for framing, hanging artwork and bulletin boards, and recycling lots of cardboard boxes.

We now have a much more functional work space that is enjoyable to work in. Our new office provides us with additional office space for staff including a conference room, lab, curatorial space, and warehouse. Previously payed for hotel conference rooms for large all-staff meetings, used the UAF lab to do wet lab work, and leased storage units. Now all of this can be done within our office building. The office is located directly across from UAF and just a few miles from the airport, two places staff travels to routinely. Being close certainly increases our efficiency.

We are now completely settled and very happy in our new digs. Not only was organization and communication the reason for our success but the huge involvement of all staff. It is a good feeling to know that we all had a say and something to contribute to make the building and our transition into it a complete success, which we will certainly appreciate over the duration of our 20- year lease.

We had no storage, curatorial, or lab space, only one small meeting room, and the IT server room was a coat closet... We now have a much more functional work space that is enjoyable to work in.

Building owners Jerry and Dawn Sadler cut the ribbon with YUGA Superintendent Dave Mills during the opening ceremony of the new Fairbanks Administrative Center.

Financial Summary

Operating Budget Base Allocations (ONPS) Expenditure Highlights

Research and Studies: $400,000

We conducted considerable cultural resource work, including historical and archaeological studies, in Coal Creek and other parts of the preserve. Many natural resource studies included collaborative studies with other agencies and the Central Alaska Inventory and Monitoring Program. Compliance reviews of projects were active and wildlife regulatory management was very active under federal and state systems.

Facilities Operation and Maintenance: $180,000

We maintained over 50 facilities in Eagle and throughout the preserve and absorbed increasing utilities costs. A solar system installed at Coal Creek decreased the reliance on fossil fuels.

Resource Protection & Visitor Services: $380,000

Interpretive programs increased in Eagle due to regular tour boat and bus tours. Outreach and educational programs with school groups utilized the newly restored Coal Creek Camp. Wildlife patrol and enforcement also increased due to increasing numbers of hunters using the preserve. Numerous wildlife violation cases were made.

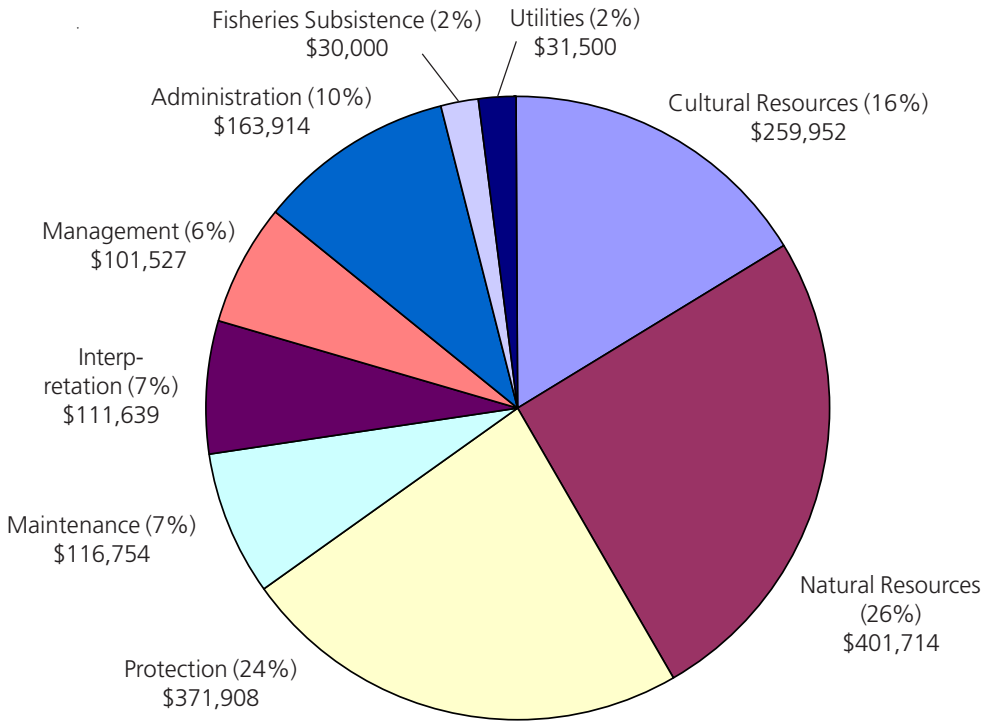
Management and Administration: $275,000

We continued to improve our information technology system in response to increased requirements and user demands. We invested considerable effort into completing the move into the new office in Fairbanks.

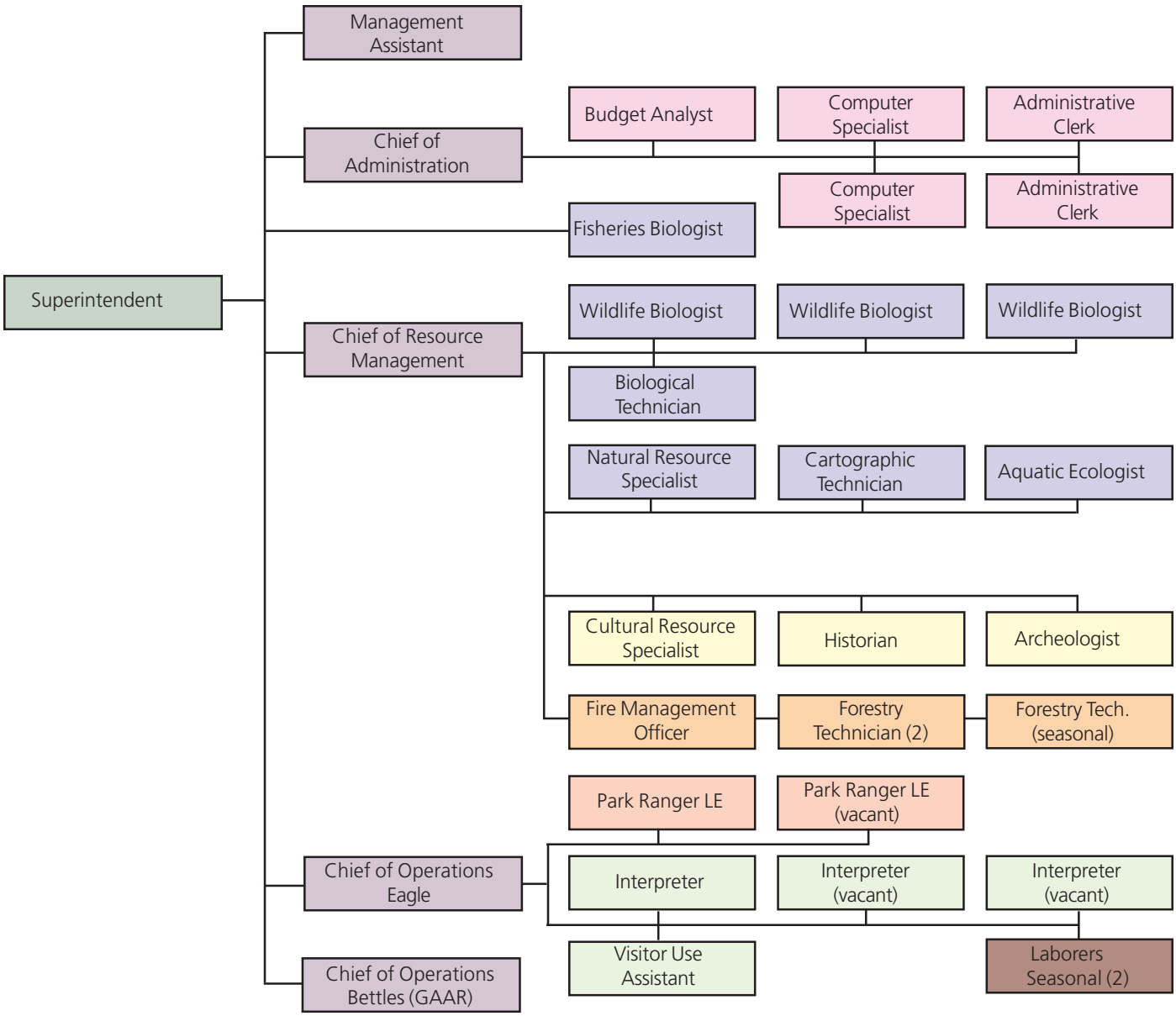
Accomplishments in 2006:

- ✧ Inventoried archeological sites
- ✧ Studied shallow lake ecology
- ✧ Reduced hazardous fuels
- ✧ Monitored wolves and peregrine falcons
- ✧ Implemented vital signs monitoring
- ✧ Documented TEK of salmon fishery
- ✧ Conducted youth education workshop
- ✧ Celebrated mining history
- ✧ Moved into new facility

All Sources of Funding: $1,588,908



Yukon-Charley Rivers National Preserve Organization



Note: All positions are shared with Gates of the Arctic National Park and Preserve except those under the Chief of Operations in Eagle.

The National Park Service cares for special places saved by the American people so that all may experience our heritage.

EXPERIENCE YOUR AMERICA

U.S. Department of the Interior ∗ National Park Service