

Yukon-Charley Rivers National Preserve Annual Report 2002





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Message from the Superintendent

I am pleased to submit this annual report for Yukon-Charley Rivers National Preserve. The year 2002 continued to be an active and successful year of accomplishments toward preserving the superlative natural and cultural resources in this unique national treasure. Our accomplishments help to gain public support for the protection of the values and resources in this remote area of the upper Yukon River in eastern Alaska. We have made significant improvements in our understanding of the area's cultural and natural resources, in the way we share this information with the public, and in the way we conduct and maintain effective day-to-day operations.

This report is organized along the outline of our Park's Strategic Plan and the structure of the Government Performance and Results Act. It links our accomplishments to park mission, long-term and annual goals and tracks measurable outcomes that allow us to determine the effectiveness of our efforts in preserving the park's resources unimpaired for the benefit of future generations and for the appreciation and enjoyment of present generations.

I am especially proud of our excellent visitor and employee safety record during 2002. We have demonstrated the effectiveness of our improved visitor orientation by improving our record to no visitor injuries for the year 2002. We have a very hazardous environment in which to live and conduct our business, perhaps the coldest and one of the remotest areas in the state. Our committed effort to constantly improve our training and a safety culture among the employees continues to yield positive results.

We have continued to conduct our award winning "Birth of a Peregrine Program" which has provided scientists and the public two months of live video from a wild falcon eyrie near the community of Eagle. Around the clock coverage allows the public to witness a falcon's life from egg to fledgling. This year a film was developed using local school children. The film is part of a distant satellite learning program that was seen in millions of classrooms around the world. We also continue to improve our educational and interpretive services provided to park visitors in heart of the Preserve at Coal Creek. A newly developed and improved web site allows people from around the world to learn about and appreciate the resources of the Preserve.

We continue to develop our cultural and natural resources programs through a number of different inventory and monitoring programs that are active. This report highlights some of these notable projects. Being a relatively newly established park unit our main focus continues to be on understanding the resources we are mandated to protect. Our natural resources staff has played a leadership roll in coordinating the first Alaska Network to inventory natural resources in three park areas in central Alaska. Program development of Long-term Ecological Vital Signs Monitoring continues to be developed for the Network.

Partnerships are what allow us to produce the wide array of results that are evident in this report. This past year we have combined our efforts with local communities and organizations like the Eagle Historical Society, Alaska Native tribal organizations, universities from around the world, nonprofit conservation groups, numerous other State and Federal resource agencies from three different countries, as well as continued work with the U.S. Department of Defense on military overflight issues.

This report highlights the dedicated efforts of the many people, organizations, agencies and partners who have provided their resources, expertise and support in making the results identified in our strategic plan a reality.

Dave Mills

Purpose and Significance of Yukon-Charley Rivers National Preserve

Located along the Canadian border in central Alaska, 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

here add much to our knowledge of the environment thousands of years ago. Peregrine falcons nest in the high bluffs overlooking the river, while the rolling hills that make up the Preserve are home to an abundant array of wildlife. The Charley, a 100-mile long wild river, is considered by many to be one of the most spectacular rivers in Alaska.



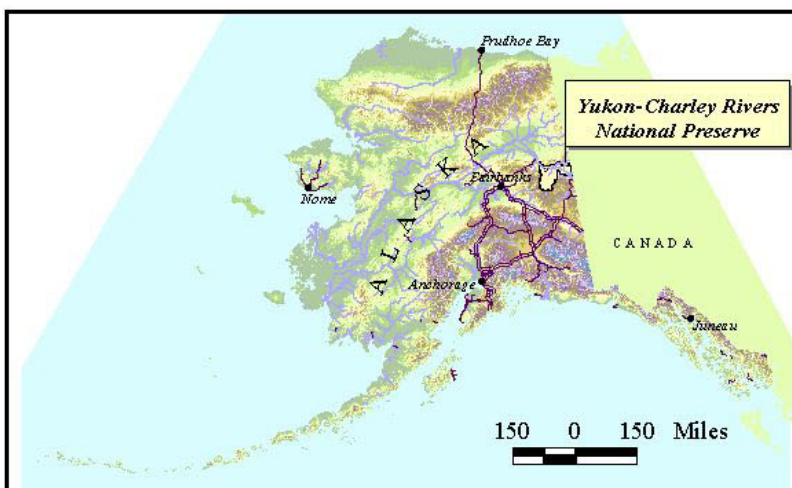
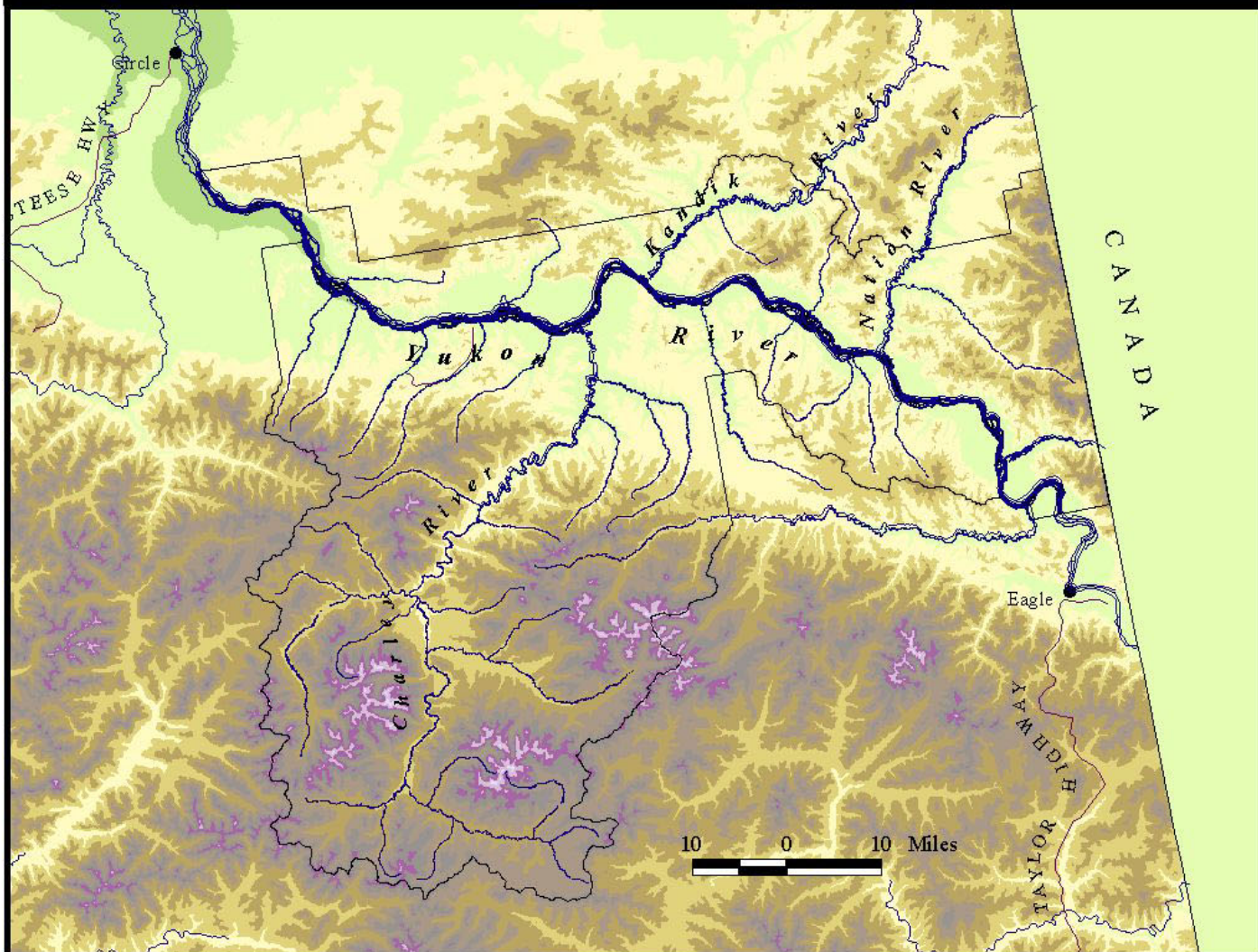
The purpose of Yukon-Charley Rivers National Preserve is to:

- ❖ Protect, conserve, and interpret the 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;
- ❖ Maintain the environmental integrity of the entire Charley River basin in a natural state, to preserve intact a subarctic ecosystem, its healthy flora and fauna, as well as geologic and natural features, for public benefit and scientific study; and
- ❖ Protect and allow for the interpretation of historic sites and events along the Yukon River corridor associated with the Klondike Goldrush.

Yukon-Charley Rivers National Preserve has national and international significance:

- ❖ A world-significant assemblage of diverse geological and paleontological resources that are unusually complete are found here, providing at least a 600 million year record stretching back to the close of the Precambrian era.
- ❖ The area between the Nation, Kandik, and Yukon rivers is postulated to be a portion of the North American plate that has escaped deformation from geological forces to remain as an incredibly intact geological and paleontological record. Some of the oldest known microfossils in existence have been found in this area.
- ❖ The entire Charley River watershed is protected in its undeveloped natural condition.
- ❖ The area encompasses habitat which supports 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 goldrush 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



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 is located. Travellers into the Preserve typically float the Yukon River, or charter an airplane to fly into the upper Charley River. Visitors to Yukon-Charley Rivers are encouraged to check in at the Eagle field office 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 serves as a base for many resource projects. At Slaven's Roadhouse on the Yukon River visitors may enjoy learning about the rich mining history of the area.

Preserve Resources

Mission Goal: 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.

Long-term Goal: Water Quality. By September 30, 2005, Yukon-Charley Rivers will continue to have unimpaired water quality.

Annual Goal: By September 30, 2002, the Nation Bluff gauge will be maintained and an aquatic biologist will be hired to ensure water quality.

GOAL ACHIEVED

Aquatic Ecologist on Board at Yukon-Charley

Yukon-Charley Rivers National Preserve and Gates of the Arctic National Park and Preserve (YUGA) now has an Aquatic Ecologist on board who is developing projects in three key areas.

Amy Larsen, whose emphasis is in wetland ecosystem dynamics, is helping to develop the Central Alaska Network's (CAN) monitoring plan. This summer she plans to conduct a pilot study at Yukon-Charley to test the feasibility of the aquatic monitoring group's strategic plan. In addition to aiding the CAN in determining the feasibility of this project, the data will provide Yukon-Charley with important baseline information on key aquatic resources in the Tatonduk, Nation, Kandik and Charley rivers.

Secondly, she is developing a cooperative project to evaluate pond drying and thermokarst pond expansion in interior Alaska. This project will be a collaborative effort between YUGA, Yukon Flats and

Kanuti National Wildlife Refuges.

As a member of the YUGA resource team, Amy also is initiating a wetland inventory and characterization project at Gates of the Arctic National Park and Preserve.

Water Gauges Maintained

Two water gauges are in operation in Yukon-Charley. The Kandik gauge was reinstalled and is being maintained and read along with the Nation Bluff gauge.

Accomplishments:

- Hired an aquatic ecologist for YUGA who is engaged in developing a monitoring plan for Yukon-Charley.
- Maintained and read the Kandik and Nation river gauges.

Annual Snow Surveys Continue to Collect Valuable Data

Knowledge of the snow cover in an area can be a tremendous aid in understanding ecosystem processes. Snow data provides information on winter severity that is necessary to understand wildlife population trends and habitat use. Snow cover information is also valuable for monitoring long-term weather trends and hydrology that may be affected by climate change, as well as for predicting the severity of fire seasons. Yukon-Charley has seven snow markers and one snow course that were established to monitor snow depth and density within the Preserve. The markers are read on a monthly basis throughout the winter. This is a cooperative project with the Natural Resource Conservation Service (NRCS).

Long-term Goal: Historic Structures. By September 30, 2005, 27 structures (40%) of Yukon-Charley River's 66 historic structures on the 1999 List of Classified Structures are in good condition.

Annual Goal: By September 30, 2002, 28 structures will be in good condition. Site visits are planned for three structures, including the Nation Bluff Cabin, Nation Bluff Cabin Cache, and Nation Bluff Cabin outhouse.

GOAL ACHIEVED

Yukon-Charley's List of Classified Structures: Working on Goal Clarification

There are currently 75 structures listed on the LCS for Yukon-Charley Rivers National Preserve. This count does not mesh with the park goal, which states that there are 66 structures on the Yukon-Charley LCS. This is due to the fact that the 5-year GPRA goal was written to reflect the status of the LCS in 1999. Of the 75 listed, 28 are identified as currently in good condition. Of those 28 in good condition, 21 are identified as historic structures.

GPRA nationwide goal 1a5 states, "50% (12,113 of 24,225) of the historic structures listed on the 1999 List of Classified Structures are in good condition." Cultural resource staff in various parks have voiced concerns about interpretation of the wording in this goal because not all structures on the LCS are historic (nor are they required to be). As a region, we continue to work on how to obtain region-wide clarification for this goal.



Museum Collections

Additional resource management staff, from cultural and natural resources, received training in collections management so we will be able to efficiently catalog and properly care for our specimens, artifacts and other items collected from the field.

The specimens collected from the inventory and monitoring work are being stored at the University of Alaska museum, and we are currently negotiating with them in regard to moving the herbarium collections into their space as well, which is climate controlled.

Long-term Goal: Archeological Sites. By September 30, 2005, archeological sites will be monitored. We currently do not have a good idea on condition status and need to work toward developing a proper/credible number.

Annual Goal: By September 30, 2002, a site monitoring plan will be developed for regular and routine monitoring of the archeological sites of Yukon-Charley Rivers National Preserve. It has been determined that developing a cyclic monitoring plan will ensure routine site visits to the various

archeological sites. We intend to complete this plan this year to put into use in subsequent years.

GOAL ACHIEVED

Site Monitoring Plan Gives Direction to Monitoring Efforts

The draft archeological site monitoring plan is completed. The newly hired, full-time archeologist will finalize the document by 2003. It is a dynamic document, designed to guide the cyclic visits to sites, which will ensure that appropriate and adequate monitoring will be done.

Long-term Goal: Geological Resources. By September 30, 2005, the Preserve will determine baseline data for paleontological sites.

Annual Goal: By September 30, 2002, inventory studies will begin within the preserve by University of Alaska geologists. Funding is being requested to begin a paleontological program at the Preserve. GOAL ACHIEVED

Yukon-Charley Rivers: The Missing Link Connecting Ice Age Records across Eastern Beringia?

Strong evidence suggests that the Yukon River once flowed south to the Gulf of Alaska in the late Pliocene. In July 2002, an international team of geologists and paleontologists from Canada, New Zealand and UAF's Quaternary Center teamed with Yukon-Charley to conduct field work in the hopes of develop-

Ash deposits...serve as sedimentary markers...and may also provide accurate and precise ages via a variety of analytical techniques.

ing a better understanding of past environments in the Preserve and eastern Beringia.

The researchers were investigating an outburst flood sequence that occurred 700,000 to 1 million years ago in the Charley River, after the Yukon had reversed direction to (more or less) its present course. This short-lived, but powerful event, recorded in graded layers of gravels, would have temporarily flowed up the Yukon River channel. The research team collected sediment and paleontological samples for laboratory analysis from several loess (silt) bluffs overlooking the Charley and Yukon rivers. Previous research in regions adjoining the Preserve reveals a complex history of glacial-interglacial climate change combined with tectonic uplift. Situated in eastern Beringia, the majority of sediments in the Yukon-Charley Preserve are beyond conventional carbon age dating and therefore represent a gap in our understanding of the rich Pleistocene history in the region. Fortunately, the Preserve is located between the fall-out areas of massive eruptions from volcanoes in the Aleutian Islands and Wrangell Mountains. Ash deposits from these eruptions serve



Dr. Brent Alloway, Chief Volcanologist at the Institute of Geological and Nuclear Sciences, Ltd., in New Zealand, samples a volcanic ash deposit on Chester Bluff.

as sedimentary markers for correlation of geologic units across eastern Beringia and may also provide accurate and precise ages via a variety of analytical techniques.

A better understanding of the paleo environments in the Preserve may lead to the discovery of archaeological sites and help us understand the distribution of known sites. This work may also help delineate flood hazards in the Preserve by documenting historical catastrophic events. Diversion of the river into its present northwesterly course would have resulted in a catastrophic flood through the Preserve. Results from this work are expected in 2003.

Better understanding of the paleo environments in the Preserve may ... help delineate flood hazards in the Preserve by documenting historical catastrophic events.

A Technical Assistance Request was initiated to provide assistance to the Preserve to complete a geologic resources inventory and management plan. Beginning in 2004, NPS networks will be hiring geologists. YUCH made a strong case to be one of the 4 networks to receive a geologist in 2004, given the magnitude and richness of its geologic resources.

Mission Goal: 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, 2005, 8 natural resource inventories identified in the Resource Management Plan are completed for Yukon-Charley Rivers. Numerous Resource Inventories are planned to be completed or implemented during the period of this Strategic Plan: wilderness resource, wolves, sheep, human use including traditional subsistence activities, fire burns, natural sound, moose, neotropical birds. This goal incorporates the majority of the non-visitor related activities for the Preserve.

**Annual Goal: By September 30, 2002, 3 additional (4 total) natural resource inventories in the Resource Management Plan will be completed (wolves, fish contaminants, sheep, and birds).
GOAL ACHIEVED**

Wolf Monitoring

For many years the Alaska Department of Fish and Game (ADF&G) proposed to reduce the wolf population in the Fortymile area in order to help the Fortymile caribou herd increase at a faster rate following a dramatic fall in numbers. In 1995 ADF&G proposed to use non-lethal means of sterilizing the alpha pair of wolves and move any remaining wolves out of the area. Some of the packs that would have been sterilized and moved lived primarily within

Currently we are following 14 collared wolves in 7 packs and averaging about 35 locations per year for each pack.

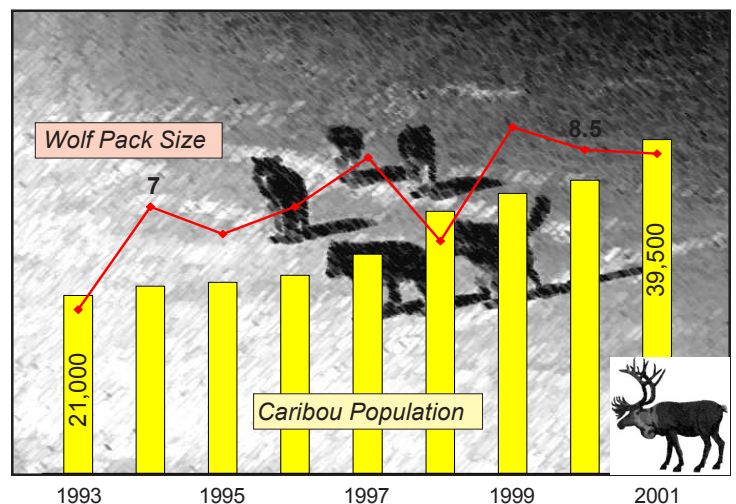
Yukon-Charley Rivers National Preserve. NPS asked that wolf packs living primarily within Yukon-Charley not be sterilized or moved. ADF&G agreed to this request, but NPS would need to continue to identify and monitor these wolf packs. In addition the population of wolves in Yukon-Charley would be used as a control group to compare and contrast to the population of wolves that were sterilized and moved.

Six wolf packs were at potential risk of control activities, all utilizing lands south of the Yukon River, outside the Preserve. No wolves considered as Preserve packs were sterilized or translocated even when they were outside the Preserve and in the treatment area. Currently we are following 14 collared wolves in 7 packs and averaging about 35 locations per year for each pack (5 of the 14 collared wolves are now wearing satellite collars and generating up to 16 locations

per week). Fall 2001 population estimate for the preserve is 92 wolves, up from 70 in fall 2000. Pup production for 2001 was down slightly from 2000 and averaged 4.5 pups per pack. Wolf harvest in the preserve decreased slightly for 2001-2002 season to 7 wolves from 9 in 2000-2001.

Accomplishments:

- Monitored the population size, demography, and home ranges of wolves in Yukon-Charley relative to the Fortymile caribou plan for sterilizing and translocating wolves that live outside the Preserve.
- Provided follow-up information on wolf demography after wolf sterilization stopped, as the caribou population continues to increase, and sterilized pairs begin to die off or pair up with non-sterile mates.



Population trends of wolves in Yukon-Charley Rivers National Preserve and the Fortymile caribou herd.

Fish Contaminants Study

In a nation-wide effort to monitor and assess the exposure of fish to environmental contaminants, NPS resource staff teamed up with the U.S. Geological Survey (USGS) to collect fish from the mouths of the Kandik and Charley rivers. Using fyke traps and gill nets, Fred Anderson, Claudia Anderson and Debbie Nigro of the NPS and Diane Nicks of USGS caught long-nosed suckers and northern pike, then transported the fish to a field laboratory on the banks of the Charley River where Nicks performed a series of procedures on each fish. The sampling procedure was designed to provide information on the presence, distribution and concentration of organochlorine and elemental contaminants in large river systems of the United States. The samples collected this year represent the farthest north samples collected in this nationwide effort. Analysis is expected to be completed by June 2003 and a report of the findings will be sent to YUCH for inclusion in the resource report series.

*The samples collected this year
represent the farthest north
samples collected in this
nationwide effort.*

Accomplishments:

- Sampled fish from the Yukon drainage system to analyze for the presence, distribution and concentration of organochlorine and elemental contaminants.



NPS and USGS resource staff pick a northern pike out of the gill net at the mouth of the Kandik River during the fish contaminants study. At the field lab on the Charley River, USGS biologist Diane Nicks (center) collected measurements, tissue and blood samples from each fish.



Natural resource staff check a gill net on the Kandik river during the fish contaminants study. The sampling procedure was designed to provide information on the presence, distribution and concentration of organochlorine and elemental contaminants in large river systems of the United States.



Lamb and ewes graze in Yukon-Charley. The Dall's sheep population within the Preserve has been steady since the initiation of the study, with a mean of 308 sheep observed.

The Effects of Military Overflights on the Movement, Activity, Habitat Use, and Behavior of Dall's Sheep

Using GPS radiocollars with activity sensors, NPS biologists investigated Dall's sheep movements, relative activity, and habitat associations in relation to military flying activity. Sheep were radiocollared at Cirque Lake, in the upper Charley River region of Yukon-Charley, where impacts of military jet overflights are mitigated, and at West Point, which is an unmitigated area just west of the Preserve.

Annual pregnancy rates and body weights were higher at West Point (unmitigated) in comparison to Cirque Lake (mitigated) at the beginning of the study but have approached parity in the final 2 years. Each year, the study site with the highest mean ewe weight also had the highest pregnancy rate. For both areas, pregnancy rates declined from 1999 to 2001.

Sheep surveys were flown each year from 1999 to 2002. The ratio of lambs to ewes has been higher at West Point than at Cirque Lake since the start of this study, but the yearling to ewe ratios were considerably higher at Cirque Lake. No trend is apparent in the lamb to ewe ratio or the ram to ewe ratio when comparing either across study areas or across years. The Dall's sheep population within the Preserve has been steady since the initiation of the study, with a mean of 308 sheep observed.

Field crews observed Dall's sheep behavior and collected data on habitat selection and sound levels during 2000 and 2001. They recorded over 300 hours of Dall's sheep behavior observations and over 200 hours of sound measurements. We are currently in the process of analyzing

this large data set.

Forage quality was assessed by comparing nitrogen content, digestibility and fiber content of vegetation samples. Preliminary results suggest that available forage quality does not differ between the 2 study sites. To examine habitat use, we determined home ranges and concentrated use areas for each study area. Thus far, we have examined the 1999 Dall's sheep GPS radiocollar location data to determine if home ranges and concentrated areas were similar among study areas and seasons. During 1999, the non-mitigated area (West Point) had significantly larger home ranges and concentrated use areas.

We are still collecting movement data on the sheep. A final report is due on the study in 2003 once all the data has been analyzed.



Biologist Jim Lawler observes Dall's sheep at Cirque Lakes in Yukon-Charley. Over 300 hours of Dall's sheep behavior observations and over 200 hours of sound measurements were recorded during the 4-year study.

Sixth Annual Bird Surveys

Most of the avian species found in Yukon-Charley Rivers are neotropical migrants, wintering in the southern United States, the tropics, and South America. Many of these bird species have experienced population declines in the last 50 years. Birds face widespread loss of habitat in critical feeding and staging areas along migration routes and in wintering areas. Pesticides and herbicides constitute additional threats to migrating birds, particularly those wintering in third world countries. Impacts of these threats on neotropical migrant bird populations may be detected

Impacts of these threats on ...bird populations may be detected first through changes in bird abundance, distribution, and reproductive success on the breeding grounds.

first through changes in bird abundance, distribution, and reproductive success on the breeding grounds. Several species designated by the U.S. Fish and Wildlife Service as "Species of Concern" breed within Yukon-Charley, including the Olive-sided Flycatcher, Alder Flycatcher, Gray-cheeked Thrush, Swainson's Thrush, Blackpoll Warbler, Wilson's Warbler, and the Tennessee Warbler.

The 2002 off-road point count bird survey marks the sixth year of this long-term monitoring project in Yukon-Charley Rivers. The objective of this study was to establish a songbird monitoring program within the Preserve that would follow established protocols and contribute to the Boreal Partners in Flight database.

Accomplishments:

- Detected a total of 19 species comprised of 215 individuals, contributing to the Boreal Partners in Flight program to monitor bird species abundance in Alaska.

Long-term Goal: Archeological Baseline. By September 30, 2005, the number of Yukon-Charley Rivers archeological sites inventoried, evaluated and listed in the National Park Service ASMIS is maintained at 181.

Annual Goal: By September 30, 2002, 181 records will be maintained in ASMIS. A report on the Foster-Keith site (mapping and documentation was completed in FY2001) will be completed. This report is important because the site is on Preserve land that shares a border with Doyon Limited. New sites will be added when found, however efforts through 2005 will concentrate on reviewing the current sites listed in ASMIS and correcting erroneous information and updating information as monitoring takes place.

GOAL ACHIEVED

Archeological Baseline Accomplishments:

- Maintained 181 records in ASMIS.
- Completed the site estimation report mandated by WASO.
- Completed the remaining documentation of the Foster-Keith site. A report will be finished by December 30, 2002.
- Hired a full-time archeologist in September.

Archeologists...examined and mapped surface deposits of stone tools and stone tool manufacturing debris which extend for several miles.



The Foster-Keith site sits on a ridge above the Seventymile River. Evidence suggests that this ridge has been used for thousands of years as a travel route and hunting lookout. A report on this work is nearing completion.

Long-term Goal: Historic Structures Baseline. By September 30, 2005, all 66 (100%) of Yukon-Charley Rivers historic structures on the FY1999 List of Classified Structures (LCS) have updated information in their LCS records.

Annual Goal: By September 30, 2002, site visits will be made to 81 historic structures and the List of Classified Structures (LCS) for these sites updated. We are fortunate to have special project funding that will allow an archaeologist and historical architect to visit all historic structures within the Preserve and update the LCS. The primary intent of this project is to develop a fire management plan and protection determinations for all historic structures.

GOAL ACHIEVED

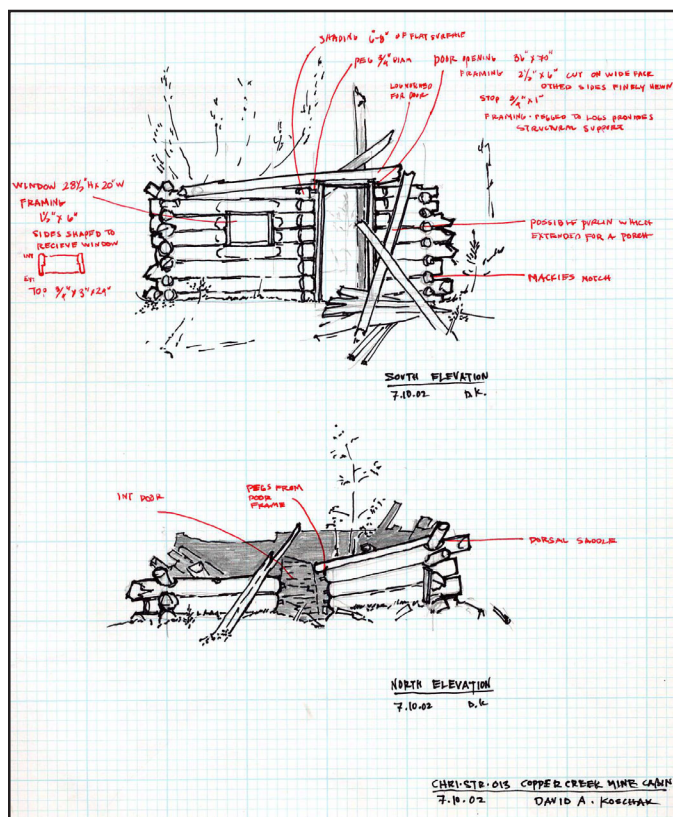
Historic Cabins Survey

The Cultural Resources and Fire Management teams conducted intensive archaeological and fire management protection status assessments on 46 of 69 historic sites, mostly cabins, in Yukon-Charley Rivers this summer.

The teams accessed the sites mostly by boat and on foot, with the more remote sites being flown into by helicopter. Archaeological documentation included conducting transects to identify and describing features/components and artifacts, drawing site maps, taking photographs, digging test pits and collecting GPS coordinates. Designating fire management protection status at each site involved assessments of combustible fuels (e.g. brush, etc.), topographical features and water source availability, among other things. Sites were then assigned a fire management protection status as critical, full, non-sensitive/defensible or non-sensitive.

Accomplishments:

- Completed archaeological documentation of 46 historic sites.
- Assessed and assigned fire management protection status to 47 historic sites: none were assigned *critical* protection status; 10 (21%) *full*; 14 (30%) *non-sensitive/defensible*; 23 (49%) *non-sensitive*.



Sketches of the Copper Creek Mine cabin, part of the documentation collected at 46 historic sites in Yukon-Charley Rivers National Preserve during this summer's archaeological surveys.

Archeological Site Estimation Project

Of the roughly 2.1 million acres in YUCH that are under NPS management, only 1% has been surveyed at a reconnaissance level and 181 sites have been reported. As many as 18,000 to 35,000 sites could exist within the Preserve. This estimate is highly speculative, but it highlights how much still needs to be learned about this huge, remote place. This is an exciting prospect since these sites represent a wealth of knowledge to Native Alaskans, researchers and visitors.



Museum Objects

These boots and saw were among the items accessioned and catalogued from the Taylor Cabin site. Ten items accessioned from the Taylor Cabin site were entered into the Automated National Catalogue System (ANCS+).

Long-term Goal: Vital Signs. By September 30, 2005, Yukon-Charley Rivers has identified its vital signs for natural resource monitoring.

Annual Goal: By September 30, 2002, vital signs for monitoring will be identified. Yukon-Charley Rivers is within Group 3 for Central Ecosystem Network, Alaska. Vital signs are indicators of the key ecological processes which, collectively, capture the function of a healthy ecosystem. This goal is required and will be important in determining the “health” of the Preserve.

Biological Inventories

This year we conducted biological inventory work on vascular plants and freshwater fish. This was the final year of data collection for all the biological inventory work in Yukon-Charley, since small mammal data collection was completed in 2001. Inventories of vascular plant flora were conducted at 72 separate sites and more than 2500 voucher specimens were collected during the 2002 field season. Approximately 200 vascular plant species new to the Preserve were identified.

The freshwater fish inventories were conducted in 6 previously unsampled bodies of water within Yukon-Charley. Prior to the freshwater fish inventory, 18 of 20 species that were expected to occur in the Preserve had been documented. The 2002 field efforts did not identify any new species to the park.

Accomplishments:

- Conducted inventories of vascular plants at 72 sites, collecting over 2500 voucher specimens.
- Conducted inventories of fish in 6 previously unsampled bodies of water.



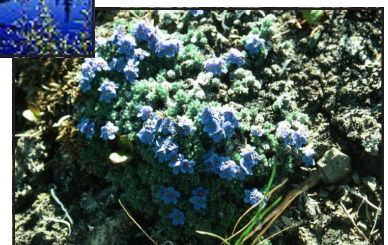
NPS aquatic ecologist Amy Larsen sorts through plant specimens collected during the plant inventory project in Yukon-Charley this year.

Vital Signs Monitoring

Substantial progress was made in the development of the Vital Signs Monitoring program for the Central Alaska Network, of which Yukon-Charley is a member park. In April, 2002, a Vital Signs Scoping Workshop was held in Fairbanks. Experts from across the country were invited, who provided input on strategies developed by the Technical Committee as to what, and how, to monitor the health of park and preserve ecosystems. Also, a report of the current knowledge of natural resources and monitoring within all network parks was generated by the Technical Committee and submitted to the Washington Office as part of the Vital Signs Monitoring Program requirements. At present, the Technical Committee for the network is narrowing down the candidate list of Vital Signs to be monitored within all the network parks and preserves. A report outlining the resultant “short list” of vital signs and the rationale for each will be generated and submitted to the Washington Office in April 2003.

Accomplishments:

- Held a scoping workshop to develop strategies for monitoring the health of the Preserve ecosystems.
- Generated a report on the current knowledge of natural resources and monitoring within all of the network parks.



Subsistence Management

2002 Yukon Salmon Synopsis

Chinook Salmon

Salmon runs to the Yukon River and its tributaries during 2002 were a mixed bag. Although by historic standards, the 2002 Chinook salmon run was below average in magnitude, it was stronger than most runs since 1998. The run was sufficiently strong to support a small commercial harvest, and approximately 25,000 fish were taken, primarily in the lower river districts. Harvest numbers from the subsistence fishery in Alaska are not yet available; however, it is thought that subsistence needs were met. Catches are expected to approximate 50,000-55,000 Chinook salmon. Spawning ground requirements were met in most portions of the drainage, except in Canada, where biological escapement needs were about 25% below the agreed upon goal.

Fall Chum Salmon

Yukon River chum salmon occur in two genetically distinct populations, commonly referred to as the summer and fall runs. For the most part, summer run chums spawn in streams and rivers in the lower and middle portions of the drainage and do not occur in significant numbers in the Yukon-Charley area.

Fall run chum salmon are a staple of the Yukon-Charley area subsistence salmon fishery. Unlike earlier running summer chums, these fish are denizens of the upper portions of the drainage, and in the late fall, spawn in spring-fed portions of rivers in Alaska and in Canada. As did other Yukon River salmon stocks, fall chum salmon abundance declined abruptly and dramatically beginning in 1998. The 2002 run was judged to be weak and the fishery was closed or severely restricted for most of the fall season. Subsistence needs were likely not met throughout the Alaskan portion of the drainage. Escapements are judged to have been relatively good to some areas, but in other areas the escapement objectives were not met.

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Yukon River Salmon Treaty

In December 2002, representatives of the U.S. State Department and the Canadian Department of External Affairs signed the US/Canada Yukon River Salmon Treaty. This agreement has been the subject of long and sometimes difficult negotiation since 1985. Under terms of this document, a bilateral technical committee was formalized as was the 'Yukon River Panel' tasked with managing and interpreting the agreement. Important elements of the treaty are Chinook and chum salmon catch sharing arrangements, agreement to restore the wild salmon stock to its natural production level, and agreement to share up to \$4 million annually for management, restoration and research on these important resources.

Moose Survey Report Completed

In November of 1999, an aerial moose survey was conducted in Yukon-Charley. We found a low density population of 0.36 moose/mi² with 36 calves/100cows and 51 bulls/100cows. The bull:cow ratio has dropped from 121 in 1987 to 84 in 1994 to 60 in 1997 to 51 in 1999. This decreasing trend is has gotten the attention of Preserve managers and although not a problem now it could be if the ratio drops much below 40 bulls/100 cows. Another survey is planned for November of 2003.



Provide for the Public Enjoyment and Visitor Experience

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

Long-term Goal: Visitor Satisfaction. By September 30, 2005, 95% of visitors to Yukon-Charley Rivers are satisfied with appropriate park facilities, services, and recreational opportunities.

Annual Goal: By September 30, 2002, 95% of Preserve visitors will be satisfied with appropriate park facilities, services, and recreational opportunities. The Preserve will utilize the Visitor Survey Cards to determine any improvements needed to increase visitor satisfaction.
SURVEY DATA HAS NOT BEEN RECEIVED

Visitor Use

Yukon-Charley Rivers continued to take a leadership role in the region in gathering information about backcountry visitors. This year was the first of the 2-year Remote and Dispersed Visitor Estimation Project. The project addresses the need for more accurate estimations of backcountry use. Yukon-Charley plays a

We have an excellent situation for counting visitors from Slaven's Roadhouse.

critical role in the project. We have an excellent situation for counting visitors from Slaven's Roadhouse. As a regional leader in estimating visitor use, Yukon-Charley is developing and implementing methods that can be adapted and adopted by other Alaska Parks.

Much of the visitor use in the Preserve is floating the Yukon and Charley rivers. Slaven's Roadhouse is a popular attraction and stopping place. It is located downstream of the confluence of the Charley with the Yukon and most floaters of both rivers pass by. Slaven's offers an excellent vantage point along the Yukon and a randomly selected sampling schedule of observation periods gives sufficient data to estimate visitor use in the area.

Estimates for this season will include the observations from Slaven's that were made, information collected at Preserve headquarters in Eagle, and entries in the log books from the public use cabins. Al-

though our efforts were not as planned, this year's information coupled with that gathered last year should give us a reasonably good picture of backcountry use in the Preserve.

Accomplishments

- Gathered information on visitor use along the Yukon and Charley rivers.
- Took a leadership role in the regional Remote and Dispersed Visitor Estimation Project.

Visitors float the Yukon River in their homemade craft.



Yukon Quest International Sled Dog Race

Yukon-Charley Rivers National Preserve hosted another successful Yukon Quest dog drop at Slaven's Roadhouse. Slaven's is a restored historic roadhouse located within the Preserve on the banks of



the Yukon River approximately 312 miles from Fairbanks along the 1,000 mile race trail. The Slaven's crew provided the mushers with first class services such as a variety of hot meals, water for sled dogs, a warm, quiet place to sleep, wake-up calls, race updates, and weather information. The crew also assisted Dr. Webber with the care and transportation of seventeen dropped dogs.

Musher Wayne Hall with his team at Slaven's Roadhouse.

National Park Service employees Pat Sanders, Doug Beckstead, Coral Conway and Stacie McIntosh, and Quest Veterinarian Dr. Warren Webber, catered to 371 dogs and thirty-one tired mushers.



Tired dogs at Slaven's Roadhouse. Beckstead, Dr. Webber and McIntosh "bag 'em, tag 'em and drop 'em" for a flight to the Eagle checkpoint.

Long-term Goal: Visitor Safety. By September 30, 2005, the number of Yukon-Charley Rivers visitor accidents/incidents is maintained at the FY1992-FY1996 five-year annual average of 0.

Annual Goal: By September 30, 2002, the Preserve's visitor accidents/incidents is maintained at 0.

GOAL ACHIEVED

Visitor Safety Accomplishment:

- We had no visitor accidents or injuries this year.

Mission Goal: 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 and Appreciation. By September 30, 2005, 86% of Yukon-Charley Rivers visitors understand the significance of the Preserve.

Annual Goal: By September 30, 2002, 86% of the Preserve visitors will understand the significance of the Preserve. Interpretive programs, including walks and talks are provided in Eagle. Outreach programs are provided in Eagle, Circle, and Central. The Preserve will hire two additional interpretive rangers.

SURVEY DATA HAS NOT BEEN RECEIVED

Interpretation Spreads Its Wings

While visitation was slightly lower than average, the 2002 season saw changes and additions to the interpretation program. A subject-to-furlough position was added to the staff this year adding a much needed boost to the coverage in the Eagle Visitor Center and Slaven's Roadhouse. The interpreters in the field experienced the flavor of the Yukon when a number of handcrafted vessels, revisiting the days of the Klondike gold rush, stopped by the roadhouse on their journey down the river.

Along with the adventuresome travelers, several school and youth groups also visited the historic sites along the Yukon corridor. One group of boy scouts has indicated that they will return during the 2003 season and undertake a service project.

Yukon-Charley Rivers was also a participant in an international electronic field trip scheduled to air on the World Wide Web on December 4, 2002. The segment filmed in Yukon-Charley focused on the recovery of the once endangered American Peregrine Falcon and included two local students working with researchers in a field setting.

The live falcon cam was, once again, a success during the summer season. Locals and visitors enjoyed watching the progress of the two chicks as they hatched and grew to begin their journey south. We held several public presentations to educate school students and the public about the on-going project.

The Yukon-Charley webmaster, Doug Beckstead, has been putting together the software and hardware needed to transmit live-feed video from the remote peregrine falcon camera onto the Internet. Once online, it will be available to a worldwide audience as part of the Preserve's expanded web page, and will be the first web cam offering viewing of a peregrine aerie in a wild environment (all others are in urban settings). Everything should be in place



Students study macroinvertebrates as part of the curriculum at Earth Quest, which is sponsored by the National Park Service and other agencies.

by the time the falcons return to the aerie in 2003.

During our spring outreach programs, students were delighted to have Wade Kaiser, the fire management archeologist, demonstrate traditional methods of flint knapping and tool construction. The program was more successful than many in recent years and teachers have shown an interest in a repeat during 2003.

Interpreters shared the tour of the Coal Creek dredge with numerous visitors this summer, culminating in a nature/birdwatching hike. Comments in the logbook at Slaven's indicate this has been a positive visitor activity. Many visitors accompanied interpreters on the walking tour of Eagle, conducted each Tuesday. During these tours, visitors are given an orientation of the Preserve resources and visitor opportunities.

Each season brings change, each new idea brings growth and, each employee of Yukon-Charley brings knowledge, understanding and education to our ever-growing visitor number.

Natural Resource Profiles Go on the Web

The Washington Office of the National Park Service mandated that all parks create a series of uniform webpages dealing with the natural resources found in them. Under the guise of the Natural Resource Profile Initiative, these pages feature short synopses of the flora, fauna, geology, plants, water and air resources of the national parks. Working with the natural resource staffs of both parks, webmaster Doug Beckstead succeeded in making Yukon-Charley and Gates of the Arctic National Park and Preserve the first Alaska park areas to meet the requirement of having these pages live and available on the Internet.

These pages are intended to provide a quick view of the natural resources in each park. In the cases of Yukon-Charley and Gates of the Arctic, the park expanded webpages expound on a number of these resources by including reports generated as part of the ongoing research by the staff. The most recent report to go online is by John Burch, entitled, *Ecology and Demography of Wolves in Yukon-Charley Rivers National Preserve, Alaska: Final Report, September 2002*. Others include reports from the Yukon-Charley bird project, and the invasive plant species inventory project undertaken by USGS biologist Chris McKee during the summer of 2002 in Yukon-Charley and Gates of the Arctic.



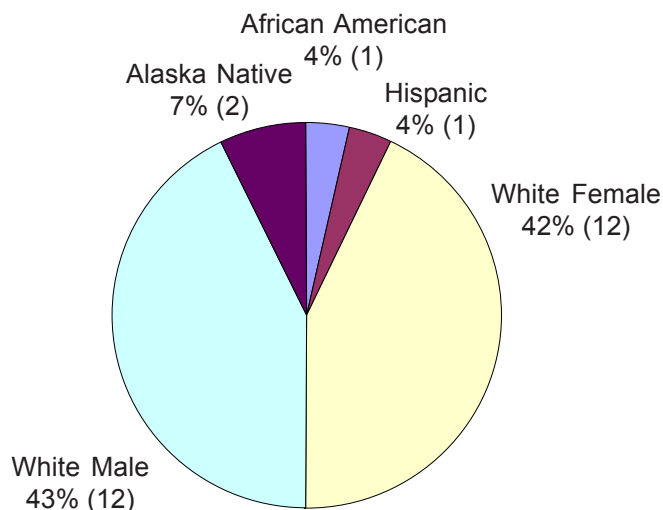
Ensure Organizational Effectiveness

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

Long-term Goal: Workforce Diversity. By September 30, 2005, the number of Yukon-Charley Rivers permanent positions in the 9 targeted series filled by under-represented groups will be increased by 1 (15%) of the FY99 level.

Annual Goal: By September 30, 2002, as vacancies occur active recruitment will be made to increase the diversity of park permanent staff in targeted positions. Supervisors, the Personnel Specialist and other park staff all assist in actively working to recruit diverse candidates. This will include working with region-wide partners and UAF faculty in recruitment as well as continuing to offer application workshops to Work First in Fairbanks and attending job fairs. Recruitment efforts vary depending on the position that is available.

Workforce Diversity of Permanent Employees



Long-term Goal: Employee Safety. By September 30, 2005, the number of Yukon-Charley Rivers employee lost time injuries is reduced to 0 from the FY1992-FY1996 five-year annual average of 3.372.

Annual Goal: By September 30, 2002, the employee lost time injury rate will be reduced to 2. The Preserve will continue extensive safety training and stressing safety at employee meetings, hold "tail-gate" safety sessions, and discuss safety in regards to individual projects/assignments.

GOAL EXCEEDED



Despite the often challenging working conditions, there were no injuries requiring time off and only had one reported to the Office of Workman's Compensation.

FY 2002 Financial Summary

Operating Budget Base Allocations (ONPS) Expenditure Highlights

\$546,000 for Resource Preservation and Management

Major work included studies on Dall sheep, bird and wolf populations and habitat. Surveys of over 60 historical sites were completed. An environmental history of the Yukon River continued. Work continued in the communities around the Preserve to ensure opportunities for traditional subsistence activities.

\$540,000 to address Visitor Services

Interpretive and educational programs were conducted in communities near the Preserve as well as for visitors arriving at in Eagle. A safety/Leave No Trace video project was initiated and a web-based learning tool was created utilizing the peregrine nesting video. Additional interpretive services were provided at Slaven's Roadhouse and Coal Creek Camp.

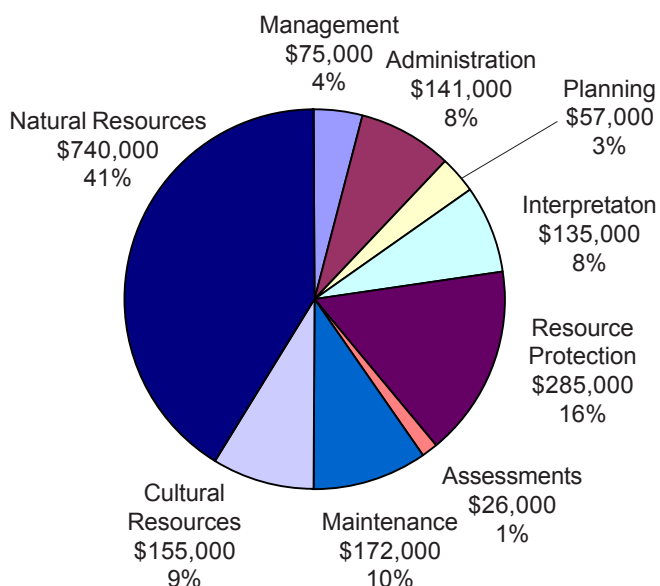
\$70,000 for Facility Operations and Maintenance

Existing facilities were made more energy efficient and alternative energy systems will be improved in remote locations. Necessary maintenance/upkeep was done at Coal Creek Camp and the Eagle office.

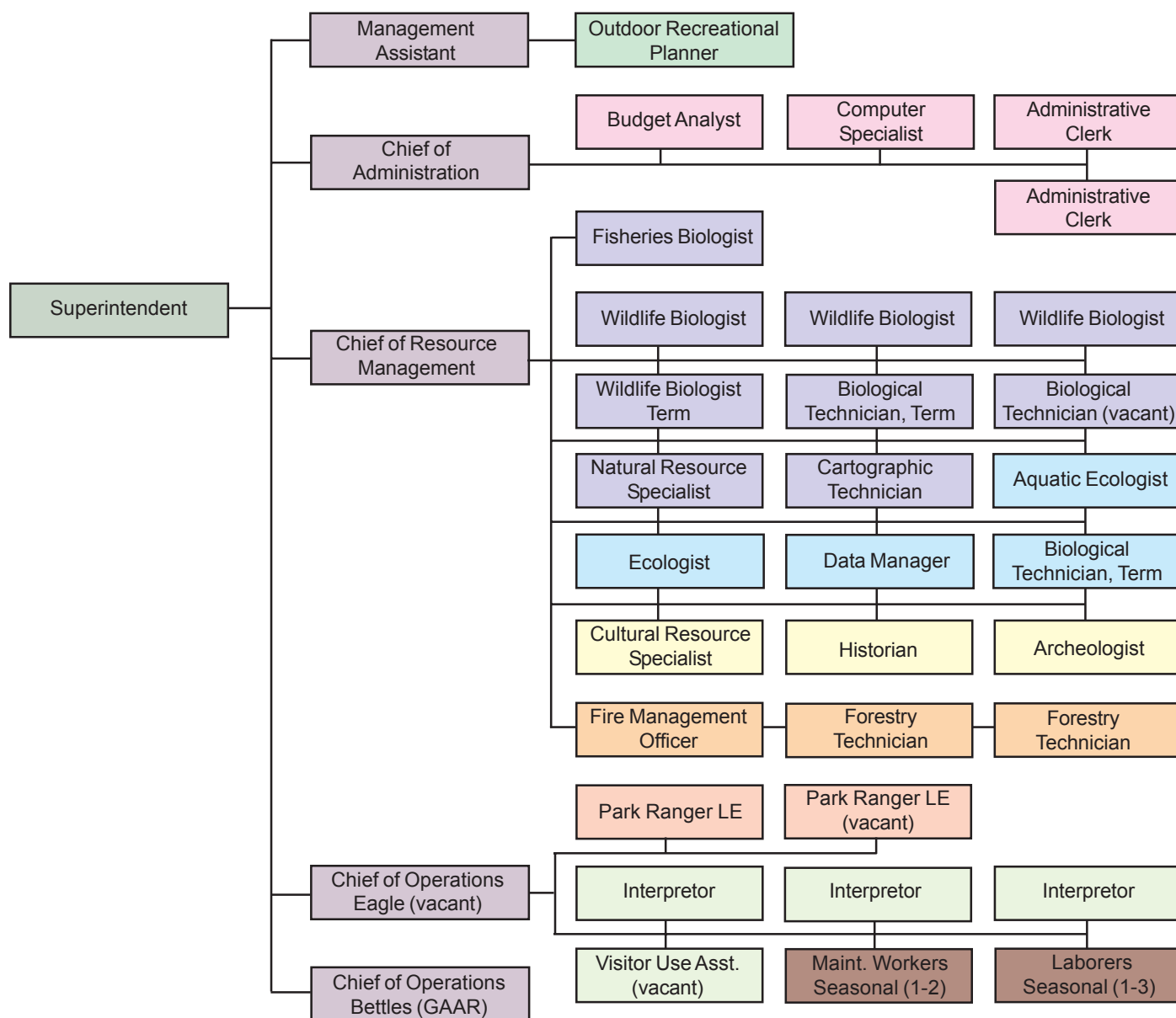
\$135,000 for Park Administration

Computers in the Eagle office were networked and connected to the Fairbanks network allowing for more efficient communications, work projects, and other duties.

All Sources of Park Funding \$1,786,000 total



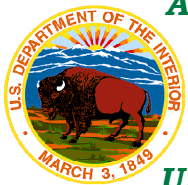
Yukon-Charley Rivers National Preserve Organization



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.*



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