

**Denali National Park and Preserve
Superintendent's Report
FY 2010**

This fiscal year will be remembered as one of great loss, due to the sudden and unexpected deaths of two long-time members of the park community - park geologist Phil Brease and wildlife advocate Gordon Haber. It will also be memorable due to the large number of multi-million dollar construction projects taking place, much of it funded by federal stimulus money granted to the park in 2009.

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Phil Brease, the park's geologist since 1986, died on May 12, 2010 during a field trip outside the park. He was doing what he loved, sharing his knowledge of park geology, with students from Healy's Tri-Valley School. Phil worked for multiple agencies before coming to Denali in 1986 to work on mining evaluation. His work with mining in the park transitioned from the contentious job of evaluating mining plans and claims to the challenges of restoring mined lands. Phil excelled at developing cooperative research relationships and throughout his career facilitated research with a wide network of educators, geologists, and paleontologists.



Park geologist Phil Brease with seminar participants

Phil's contributions to park geology and paleontology were many. His exceptional wit and excitement was infectious as he communicated a colorful geologic story to countless

and diverse audiences. Phil's name will live on in the minds of many researchers, park staff, visitors and school children, as well as in the Devonian brachiopod named in Phil's honor, the *Myriospirifer breasei*.

Gordon Haber, an independent wolf biologist, died on October 14, 2009 when the plane that he had contracted for a wolf survey crashed in the park a few miles north of the East Fork River. He was a vocal activist for the preservation of the park's wolves, which had been the focus of his research for more than 30 years. Although he was often at odds with park staff regarding wolf management issues, Haber was respected for his passionate commitment to the protection of the park's iconic wildlife. Haber was respected for his passionate commitment to the protection of the park's iconic wildlife.

In an amazing twist to the tragedy, the pilot, Dan McGregor, survived the crash and resulting fire. In spite of having sustained severe burns and other injuries, the next day he walked from the crash site to the Igloo Creek Campground, a distance of approximately 15 miles. There he encountered two campers, who drove him to his home outside the park and alerted authorities. He was stabilized and interviewed by park ranger medics prior to being transported to a Seattle burn center.

PARK ACCOMPLISHMENTS AND SIGNIFICANT ISSUES

NEW PARK FACILITIES UNDERWAY OR COMPLETED

Work began on two large projects, a wastewater treatment facility in the entrance area and the new emergency services and law enforcement facility. Both were funded by the American Recovery and Reinvestment Act (ARRA). The wastewater treatment facility will replace the current wastewater treatment lagoon and meet Alaska Department of Environmental Conservation wastewater disposal regulations. The project will also rehabilitate the wastewater collection system in the park's entrance area.

The emergency services and law enforcement facility is located behind the C-Camp housing area, and when complete will consolidate functions that currently take place in seven different buildings. The facility will house the park and regional communications center, provide work space for the ranger staff, heated and secure parking for multiple emergency vehicles, and storage for emergency medical, fire, rescue, and law enforcement equipment.

Late in the summer the rehabilitation of the Mile 80-84 section of the Denali Park Road began, along with work to address safety concerns at other locations on the road between Mile 73 and 86. The road upgrade includes the construction of passing pullouts, stabilizing soft and oversteep road edges, and culvert replacement. The project will greatly improve sight distance for drivers of all vehicles traveling that narrow section of roadway.



Work at Mile 82

Construction on the Savage Alpine Trail, another ARRA funded project, was also initiated. The four-mile long trail will connect the Savage Rock Trail to the new Mountain Vista Trailhead (rest area) at Mile 13 on the park road, providing enhanced hiking opportunities along the portion of the road that is accessible to all vehicles.

The Teklanika Rest Area was completely replaced as part of a project using Federal Land Recreation Enhancement Act (FLREA) funding. Many alternatives were considered during the design of the new facility, including having a water-based system, but park managers determined that the best option was the ventilated vault toilets that have been built in other areas of the park. Special details, such as steel tanks to hold up to the Teklanika River gravels, photovoltaic panels to provide lighting late at night and an architectural design matching the existing bus shelter and observation deck were incorporated into the project.

The new vault toilets replaced 28 chemical porta-potty style toilets as part of the park's plan to bring the waste discharge of the aging wastewater treatment facility into compliance with state guidelines. They are all ADA compliant. The facility includes a men's urinal.



New vault toilets at the Teklanika River Rest Area

The kennels road re-alignment project was completed in November 2010. The new road will reroute sled dog demonstration and other vehicle traffic away from the historic park headquarters district, and provide increased public parking with the addition of a new parking area. The project will also improve ADA accessibility to the kennels and enhance winter recreational use of the park by the addition of electric plug-ins in the parking areas.

The newly re-constructed trail that connects the Denali Visitor Center to the Triple Lakes is essentially complete, as only minor re-routing on the ridge needs to be done in 2011. This moderately strenuous, nearly nine-mile trail offers a variety of hiking options, including a section that is ADA accessible. The hike also provides good viewing opportunities for a variety of wildlife, including beaver, moose, bears, and waterfowl.

STATE ELIMINATES WOLF TRAPPING BUFFER ON PARK BOUNDARY

In late winter 2010, the NPS proposed to the Alaska Board of Game that a 64% extension of the area adjacent to the park boundary that was closed to wolf trapping would quadruple the protection outside the park for the two most vulnerable and often-viewed wolf packs in the park. In March 2010 the Board of Game rejected the NPS proposal and voted to eliminate all existing protection for Denali wolves traveling outside the park by removing the Stampede Corridor and Nenana Canyon closed areas. The board also closed any dialogue on the issue by voting to not reconsider the closed area policy for six years.



Wolf pup near Toklat

The taking or harvest of wolves near the closed area has the potential to decrease wolf numbers in the park, alter wolf behavior, decrease opportunities for wolf viewing by park visitors, and increase the likelihood of sightings with wolves with trap-related injuries. The spring 2010 estimates of wolf population size on the north side of the park were the lowest in more than 25 years. The lower population size has little effect on wolf populations at a regional scale, but can have significant, years-long effects at the park level, and can have substantial impacts on visitor wolf viewing opportunities and park experience.

NLC VISIT

From August 9-13, 2010, the park hosted the NPS National Leadership Council (NLC) for their quarterly meeting. It was the first time the NLC, which consists of the NPS Director, Deputy Directors, Associate Directors, all the Regional Directors, NPS Communication staff and others had been to Alaska in over ten years. They traveled by train from Anchorage on Monday, and met in the Murie Science and Learning Center the next two days. NPS Director Jon Jarvis introduced his staff and answered questions from park employees during an all employee gathering Thursday morning. Afterwards the group, along with family members, traveled further into the park via bus as far as the Eielson Visitor Center. On Friday the group stopped in Talkeetna for lunch and an orientation to the mountaineering operation on their way to Anchorage.

Park staff provided special hike options for family and NLC members during the week's visit. Joint Venture hosted an evening BBQ featuring Alaska-grown menu items, which provided park partner organizations and local elected officials with the opportunity to meet NLC members. Tom Strickland, Assistant Secretary of the Interior for Fish, Wildlife and Parks and two staff members arrived in time to also join the BBQ. The next day they hiked the almost completed new trail connecting Riley Creek and the Triple Lakes with Superintendent Paul Anderson.



NLC members at Denali entrance sign

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DIGNITARY VISITS

Other than the NLC and Assistant Secretary visit, it was a relatively quiet year for dignitaries. Other guests included a group from the Trust for Public Lands, Dr. Richard Dawkins, a world-known evolutionary biologist, staff members of Senator Murkowski and Representative Don Young, Senate Appropriations committee staff, and representatives from the Shiretoko Nature Foundation in Japan.

ACCOMPLISHMENTS BY DIVISION

PLANNING

Planning and Compliance Division projects during 2010 included continuation of the *Denali Park Road Vehicle Management Plan*, and continuing efforts to implement the 2006 *Backcountry Management Plan* and 2006 *South Denali Implementation Plan*.

New Personnel

Paula Homan joined the Planning Team as an Environmental Protection Specialist in May 2010.

The Denali National Park Aircraft Overflights Advisory Council

The Denali National Park Aircraft Overflights Advisory Council, a Federal Advisory Committee Act chartered group, met three times during the year to provide recommendations to the NPS on ways to mitigate the impacts from aircraft overflights and achieve soundscape standards set in the plan to meet desired future conditions. Three formal recommendations were made to the park during 2010, all of which the park accepted.

South Denali Implementation

The multi-agency partnership hosted several site visits to the proposed visitor center location with legislators and numerous VIPs. The Sea Lion Corporation expressed interest in donating 130 privately held acres adjacent to the project to state park lands.

Progress was made on a revision to the Denali State Park Special Use District with an anticipated finalized ordinance in 2011.

Gas Line Project

The planning division continued to meet with the proponents of the Alaska Stand Alone Gas Pipeline (ASAP), as well as with the federal agency partners in the impending Environmental Impact Statement that will evaluate an alternative that includes installing 7 miles of the 750 mile long pipeline through Denali National Park. This proposal generated Congressional legislative language for the section of pipeline that would pass through the park. A draft EIS is scheduled for 2011.

Compliance Program Management

Environmental Assessments and Findings of No Significant Impact were completed for the following projects: Rehabilitation of the Porcupine Forest Section of the Park Road, Construction of a New Access Road and Parking Area for the Denali Park Kennels, and Certifying a Right-of-Way for two inholders in the Stampede Area of the Park. Forty-four projects were tracked at the categorical exclusion level of National Environmental Policy Act compliance.

ADMINISTRATION

A major accomplishment of the division was the completion and approval of the 2010 housing needs assessment, one of the first done by the NPS in ten years. The information documented the park's need for 10 additional permanent employee housing units and 22 additional seasonal housing units, due to the growth at Denali over the last ten years and the lack of suitable locally-available housing. Trying something new this summer, for the first time the park leased 13 seasonal housing units outside the park to support seasonal operations. The lack of housing in the area has also been a major factor in attracting applicants for vacant and new permanent positions.

Staff continued to work with supervisors on a variety of C-Camp issues. This year new check-in procedures involving the supervisors and other policies were implemented. Denali's Required Occupant positions were re-certified. Forty-five west end seasonal positions and eight east end permanent positions are now certified.

Human Resources

FY10 was the last year that the park will have on-site human resources staff as the NPS implements its Workforce Management Transition. Denali is no longer its own Servicing Personnel Office – all Alaska parks now work through the regional Servicing Human Resources Office (SHRO). Long time Human Resource Specialist Bill Allen will retire in January 2011. During his final season he processed over 110 vacancy announcements/certs, a task that will be transferred to the regional human resources

office in Anchorage. Bill's dedication to giving Denali top of the line service and his skills will be sorely missed.

All of the Official Personnel folders have been scanned and uploaded into the new Electronic Personnel File system that allows employees to access their folders on-line.

IT

IT staff relocated into a new building this year, which gave them the space to more effectively manage the park's IT equipment and infrastructure needs. On top of moving out of the old office, into a temporary office and finally into the new office, the changeover to the new VoIP phone system was completed for the entire park, including Talkeetna. This was a very complex project, as the old and new systems had to operate simultaneously while users were being moved from the old system to the new, with little or no downtime during the transition. IT staff responded to required security mandates from DOI, including a DAR encryption that had to be installed on all park laptops (over 100) during a very short time frame.



New IT building

Budget/Finance/Procurement

Katy Beltrano from Golden Gate National Recreation Area was hired for the GS 05/06 procurement position. Bonni Burnell transitioned from her resources administrative assistant position to take the GS 05/06/07 Budget Tech position that supports Admin,

Commercial Services, Planning, Rangers, and the Superintendent's Office. The staff successfully budgeted, tracked and closed out FY2010, which included the \$14 million ONPS Base and approximately \$23 million from all other fund sources.

COMMERCIAL SERVICES

Chief Donna Sisson left in October to pursue a new opportunity in Yosemite. The chief position was filled by acting assignments throughout 2010, as the position remained vacant in spite of repeated recruitment attempts. The remaining staff managed one Category I Concession Contract with gross receipts in excess of \$22 million, eighteen Category III Contracts with combined gross receipts in excess of \$2 million, and 45+ Commercial Use Authorizations.

Significant accomplishments of the year included:

- Requested a two-year extension of JV's Category I Contract, the first negotiation-based extension service-wide under Public Law 105-391. The extension is needed in order to complete the Denali Park Road Vehicle Management Plan and EIS prior to the advertisement of the new contract.
- Installed bicycle racks on more busses, increasing by over 300% the capacity of the bus transportation system to accommodate visitors with bikes.

MAINTENANCE

This year was another record year of funding for projects. With a combined total of approximately \$22 million of ONPS, project funding, and flexible base this represents all "in-house" expenditures, and was managed through 116 separate accounts. Centennial funding was \$150,800.

ESFMB and C Camp Utilities Phases 2-5

The first construction year of the new Emergency Services and Fire Management Building (ESFMB) and four phases of the C-Camp Utilities Rehabilitation started in the spring under the American Recovery and Reinvestment Act (ARRA). The ESFMB and its annex will support the park's law enforcement operation including the Alaska Region Communications Center along with the Fire Management operation. The utility rehab will provide new road access to the camp, new fuel filling stations and tank storage, new parking lots for employees and seasonal residents, and the second of three phases of water, wastewater, and electrical replacements for the camp. This two year construction effort is scheduled for completion in the fall of 2011.

WWTF

Construction was started on a major rehabilitation of the Denali Waste Water Treatment Facility (WWTF) in April 2010. This marks the culmination of over six years of testing, planning and design work after high nitrite levels were discovered in monitoring wells at the existing plant. In 2004, Superintendent Paul Anderson signed a letter outlining interim and long range plans to bring the plant effluent into compliance with State and Federal requirements, and forecasting 2010 and 2011 as the years of construction. True

to the plan, construction on the \$3.9 million project commenced this year. The new plant uses a dual-power multi-cellular aerated lagoon system to treat wastewater. This year's accomplishments include construction of the outfall pipe from the plant to the Nenana River, which involved trenching under the Parks Highway. Completion of the facility is scheduled for September 2011.

Other Projects

As part of the park's initiative toward sustainability, the division purchased solar panels for C-Camp cabins and the Talkeetna Ranger station. Further efforts to reduce electrical demands have been initiated with the purchase of on-demand propane water heaters for park facilities, which will be installed in FY 2011.



Talkeetna Ranger Station with new solar panels

Energy savings were also observed at the Denali Visitor Center due to the removal of nineteen 50watt halogen bulbs and nine 75watt halogen bulbs. Additionally 61 IPLC (intelligent parking lot controllers) units were installed in the park for vehicle block heater plug ins. These units saved 40.7% on the amount of electricity used for keeping vehicle engines warm during the cold winter months.

The Mountain Vista Trailhead (rest area) adjacent to the Savage River Campground was completed in 2010. In addition, day labor crews were also funded to finish construction of three vault toilets at the Savage Cabin, a bus shelter at the Savage River, and work on trails leading out from the Mountain Vista Trailhead.

Personnel

Dutch Scholten, Denali's Chief of Maintenance since 2006, retired at the end of June. He came to Denali in 2000 as the Assistant Chief of Maintenance. During his tenure the maintenance budget, workload, and staffing grew exponentially. The park saw the construction of two major visitor centers and many other visitor facilities, the rehabilitation and remodeling of numerous structures, many of which are historic, the building and maintenance of a trail system, and countless repair/rehab and cyclical maintenance projects. Dutch was instrumental in the implementation of FMSS within the NPS. He provided service-wide training early in the program's development, and due to his efforts Denali has been a leader in the Alaska Region. His wife Tammy resigned from her park engineer position later in the summer.



Kristen, Tammy, Dutch and Ryan Scholten

A variety of significant vacancies were filled this year, including:

B&U Foreman - Lonnie Hergenrider

FMSS Specialist - Susan Lehmann

USRO - Alison Van Dyke

Electrician - Jonathon Fitch

Janitor - Steven Thomas

FMSS Assistant – Phil Sauvey

This year's summer workforce totaled over 185 employees, not including volunteers and Student Conservation Association interns. With the intention of bringing young, new and diverse talent into the NPS workforce, the division hired 21 special emphasis employees in FY10. These hires included twelve in the STEP program, seven through partnerships with the Alaska Job Corps in Palmer and Riverside Transition Partnership Program in Southern California and two through the "Wounded Warriors" program. The division also actively supported the park's volunteer program (VIP), in which 89 individuals

contributed a total of 11,702 volunteer hours to the park, averaging 131.7 hours per volunteer.

NATURAL RESOURCES

Denali Park Road Capacity Study

In summer 2010, researchers continued to collect sheep behavior observational data along the park road, GPS data on vehicle movements, numbers of vehicles at rest stops, wildlife stops, and in viewsapes, and sound data along the road. Bus drivers were encouraged to continue entering wildlife sighting information into touch screen panels for long-term monitoring of wildlife populations along the road. To enhance these data, an inter-divisional bus ride-along program was implemented where NPS staff were issued hand-help computers and rode buses collecting data for the Road Study as well as driver evaluation data for Commercial Services. Researchers from the University of Vermont returned to Denali in summer 2010 to administer stated choice surveys to further define visitor preferences regarding park road management. A summary of their findings is expected in early 2011.

Virtual Tour of Landscape Change in Denali

Botany staff developed a computer-based virtual tour of landscape change in Denali using paired historic and recent photographs. The tour is designed to connect a visitor to the landscapes of Denali and to changing landscapes around the world. The matched photo pairs: 1) demonstrate that a visit to Denali represents only a snapshot of the ecological conditions that may exist in the future or existed in the past; 2) enrich public understanding of ecological change, and 3) encourage discussion of the consequences of human actions on the landscape in relation to human-induced climate change, park management policies, and day-to-day living – either in Denali or near a visitor's home. The display was installed at the MSLC in May 2010.

Fire Management

A total of three wildfires burned 1.70 acres of land in the park during the 2010 fire season. One of these wildfires was human-caused and was suppressed at 1.50 acres. One fire was lightning-caused and declared a natural "out". The other was a holdover from the 2009 lightning-caused Foraker Pond Fire. Fire Management staff accomplished several hazard fuels treatment projects and prescribed fires (i.e. pile burns) at backcountry sites. Hazard fuels were treated around structures in the headquarters area to maintain defensible space in case of a wildfire.

Overview of Bird Monitoring in Denali

The park currently monitors trends in the abundance and distribution of Trumpeter Swans (in cooperation with the U.S. Fish and Wildlife Service), Golden Eagles, Gyrfalcons, and a suite of passerine birds. The Golden Eagle monitoring study started in 1987 and focuses on identifying trends in the occupancy of nesting territories and reproductive success. Denali is home to one of the highest densities of nesting Golden Eagles and this program is currently the only long-term monitoring program for this species in the high latitudes of northwestern North America. A new study was implemented in 2010 and will provide

a benchmark against which to measure changes in the presence, abundance, and distribution of birds nesting in boreal forest wetlands in specific regions of Denali in relation to a changing climate.

Bear Management

Between May 24, 2010 and September 13, 2010, 86 bear-human interactions were documented: 71 encounters (17 in front country, 54 in backcountry) and 15 incidents (four in front country, 11 in backcountry). The total of 86 BIMS this year is a 12% decrease from the 2009 total of 98. Of those interactions rated as encounters, 17 occurred in the frontcountry and 54 occurred in the backcountry.

Wolf Monitoring

The current study consists of maintaining one to three radio-collared wolves in each known pack inhabiting the park north of the Alaska Range. In April 2010, 12 wolves in 12 packs in and around Denali wore conventional, VHF radio collars that are located from an antennae-equipped airplane. Another seven wolves carried GPS collars that determine the animal's location once per day, store the data, and upload it through the ARGOS satellite system.

In April 2010, there were approximately 59 wolves in the 12 packs being monitored by park biologists. The estimated density of wolves was about 3.5 wolves per 1000 square kilometers, the lowest wolf density estimate in Denali since 1987. Only five wolves were captured and radio-collared in winter 2009-2010, because of unfavorable weather and unavailability of qualified capture pilots. Wolves from several areas on the edges of the park have been found with hair loss and other coat problems in recent years. The Alaska Department of Fish and Game has diagnosed lice in wolves from the Tonzona and Toklat river areas near the park. Between April 2009 and August 2010, seven collared wolves died of natural causes and three were shot by humans outside of the park/preserve boundary.

Climate Monitoring

Climate and snow data from the Central Alaska Network (CAKN) climate stations were disseminated through interagency agreements and working partnerships with the Western Regional Climate Center (WRCC) and the Natural Resources Conservation Service (NRCS). The CAKN data were transmitted real time and available via the web for summaries, analyses, and downloading. These data were used to support other natural resource programs including caribou distribution and abundance, avian productivity, vegetation studies, stream surveys, as well as input for practical management issues such as construction projects, road work, and aviation safety. All data are available on the web at <http://wrcc.dri.edu/NPS>.

A few climate highlights from 2010:

- The long-term weather station at Denali Park headquarters was upgraded with a new fence, new instrument shelters, and an interpretive sign this year. The National Weather Service was interested in giving the site the recognition and attention it deserved. Observers have been recording daily weather data from this site for 85 years. It is one of the longest and most valuable climate records we

have for the Central Alaska Network. The photos below are before and after shots:



- May temperatures across the Central Alaska Network were 4- 6° above normal, while the precipitation was well below normal. This led to an early and robust start to the fire season - by the end of May there were 87 active wildfires across the state. June brought cooler temperatures and more precipitation across the network, leading into two months of cloudy, cooler, and wet weather. Record rainfalls occurred in the eastern portion of the network in July with heavy rains causing severe flooding from Yukon-Charley Rivers down to the northern portions of Wrangell-St. Elias. Precipitation totals for Denali park headquarters were about 70% of normal for July. The temperatures rebounded in August with the mean monthly temperatures above normal in most areas of the CAKN region. In September, a high pressure system stabilized over the state bringing a long stretch of warm dry days. The “snow on” date at Denali park headquarters, or the first day of the persistent annual snowpack, was October 27, 2010 - almost a month later than normal.

Weather Notes for Calendar Year 2010

- The mean annual temperature was 0.2° F above the long-term average
- July was
 - the **second warmest July on record**
 - 4.1°F warmer than the 83-year long-term average
 - at or above 70 degrees (as maximum temperature) for 17 days (on average there are 10.3 days in July above 70)
- Record high temperatures were recorded in mid January, late April, mid July and mid October
- Record low temperatures were recorded in mid March, mid August, and mid November
- January, March, and November were quite a bit cooler than normal
- May, July, October and December were much warmer than normal
- Annual precipitation was 3.72 inches below normal
- June and July had 40-50% less rainfall than normal, while August totals were an inch more than normal

Temperature

- Maximum temperature: 88° F on July 9
- Minimum temperature: -41°F on January 4
- Mean annual air temperature: 27.4°F (just about at the historical average of 27.2°F)

Precipitation

- Total precipitation: 11.28 inches
- Departure from normal: -3.72 inches
- Max. 24 hr precipitation: 1.23 inches on August 31
- Total snowfall: 70.1 inches from July 1 to June 30
- Departure from normal: - 9.8 inches
- Maximum 24 hr snowfall: 4.4 inches on December 17

NPS Toklat River Dynamics and Gravel Acquisition

The Denali Gravel Acquisition Plan authorizes gravel to be removed from the Toklat River Plain in order to support maintenance needs of the Denali Park Road. In 2008 and 2010, approximately 20,000 cubic yards of gravel were removed from the Toklat River Plain by a “mirror channel method” whereby channels mirroring existing braids were cut. The method allows for minimum impact on the river system while providing a long-term sustainable gravel yield, without the need to transport gravel much longer distances if it were acquired from outside the park.

Park staff is monitoring floodplain dynamics, and in 2009-2011 will complete a comprehensive analysis of the Toklat River system assessing cumulative impacts from bank reinforcement along the Toklat access road, from the existing bridge lengths and causeway, and from gravel extraction. In 2009, a high-precision digital elevation model of the floodplain and high-resolution aerial photographs were acquired. Additionally, a re-survey of the long-term cross sections used to monitor river dynamics was completed.

Glacier Waste Research

An agreement was developed with Alaska Pacific University researcher Dr. Michael Loso to assess effects of human waste on Mt McKinley. The three-year project will assess the biological risk to backcountry visitors and related glacier dynamics in order to inform mountain waste management practices. In 2010, a graduate student collected snow and water from various areas on and around the West Buttress climbing route for analysis of bacterial effects on the environment. The student also conducted extensive searches for historic human waste, but wasn't able to find any after significant effort. The work built on prior work by an APU student established the surface movement field in the area of the Kahiltna base camp. At the end of 2011, researchers hope to add a glacier flow model. These data taken together will provide information for future management of waste on Mt. McKinley.

Glacier Monitoring

Cooperative agreements were established with University of Alaska, Fairbanks and Alaska Pacific University to create glacier extent, inventory, and volume change products for Alaska national parks (including DENA and WRST) over the next three years. Fieldwork was conducted at Denali during two field campaigns in May and September in addition to a fixed wing over flight in March to search for surging glaciers. No surging glaciers were detected this year. Field measurements indicate that the net balance at both index stations and for the entirety of the glaciers was negative this year. The negative mass balance adds to the overall negative trend in the cumulative balance since measurements started in 1991. This year marks the reversal of a shorter term positive trend since 2004 on both glaciers. The surface speed at the index station appears to be decreasing through time since 1991 on Kahiltna and increasing at Traleika with an unprecedented acceleration between May and September 2010. Panoramic gigapixel photography was newly employed this year for several sites. In addition, a GPS survey on East Fork Toklat glacier collected glacier surface elevation data along a longitudinal profile, legacy mass balance stake location and heights, and several points to map the terminus position. The survey on East Fork Toklat shows continued thinning of 30 to 140 meters.

Air Quality Monitoring

2010 marked the 30-year anniversary of continuous air quality monitoring in Denali. The park participates in several nationwide air quality monitoring networks to measure ozone, aerosols, visibility, airborne sulfur and nitrogen compounds, and the deposition of contaminants through precipitation. In a NPS Air Resources Division assessment of air quality conditions and trends from 2004 through 2008, Denali results were positive. For all parameters (visibility, ozone, and deposition of sulfur and nitrogen compounds), conditions were rated as good, and all trends were stable.

Soundscape Monitoring

In 2010, park staff deployed, maintained, and removed a network of monitoring stations which collected more than 4500 hours of acoustic data in nine locations. Two of these were at high elevation on the West Buttress climbing route of Mt McKinley, and required considerable effort by park soundscape and mountaineering staff to install and maintain. One of these – placed at 14,700ft base camp – successfully collected acoustic data at the highest elevation so far in the National Park System.

Denali's Sound Program continues to collect and interpret acoustic data for the Denali Overflights Advisory Council so that they may make recommendations based on good science. The Council will develop voluntary measures for assuring the safety of passengers, pilots, and mountaineers and for achieving desired future resource conditions at Denali.

Social Science Program

In 2010, the program drafted a new protocol for collection and entry of monthly visitor use data and continues to improve upon overall park use statistics. In addition, the program worked with UAF researchers to complete a backcountry hiker survey (and

created a digital layer of all day hiker routes); completed a Economic Impact Model for Denali publication with Dan Stynes; oversaw the implementation, data collection, and analyses of trail counters at ten locations within the existing trail network along the park road and presented results of prior Denali social science research to the Overflight's Advisory Committee.

Night Sky Survey

In September 2010, the NPS Night Sky Team conducted an assessment of night sky conditions in Denali. They surveyed six sites, collecting full-sky photographic data to quantify light pollution and night sky brightness. Initial results indicate that although the night sky is relatively pristine throughout most of the park, artificial light encroaches on some locations. While they were here the night sky researchers gave a presentation to park staff, addressing night sky interpretation and better design of outdoor lighting.

CULTURAL RESOURCES AND SUBSISTENCE

New Archaeologist

Penelope (Daniels) Del Bene was hired in September 2010. She worked as an archaeologist for the U.S. Forest Service in California and the Bureau of Land Management in Wyoming. These experiences provided her with a breadth of knowledge applying heritage resource law to a variety of cultural resource types including trails, historic sites, traditional cultural properties, and prehistoric sites.

Archeology Survey

A four-year archeology survey project concluded in 2010. A crew of four archeologists spent the month of June in the backcountry near the Swift Fork of the Kuskokwim surveying and testing one prehistoric site. Condition assessments on 23 previously recorded sites were completed on sites near the park road. A final report by Brian Wygal is being peer reviewed. This project concluded with more than 16,000 acres of the park receiving intensive archeological survey, resulting in the documentation of 30 previously unrecorded sites.

Museum Collections

The curator completely reorganized the collections vault after the installation of new museum storage cabinets and shelf units. This increased storage of natural history and cultural specimens/objects by 40% and archival storage by 300%. Jane Lakeman departed Denali in March to take a position in the Alaska Regional Office. Kirk Dietz, currently a curator with the Department of Interior in Washington, DC has been hired replace her. He will arrive in the park in December 2010.

Successful Federal Subsistence Regulatory Changes

- *WP10-31 – Individual Customary and Traditional Use Determination for Moose and Caribou for GMU 13E.* This regulatory change provides for an individual customary and traditional use determination for a resident living in Game Management Unit 20A for hunting moose in Game Management Unit 13E.

- *WP10-95- Limit harvest of wolf hunting in Units GMU 20C – that portion within Denali National Park and Preserve.* This regulation will reduce the harvest of wolves in Kantishna (Game Management Unit 13) during August 10 to April 30 from ten wolves to one wolf, and during November 1 to April 30 to five wolves.
- *WP10-96 – Reinstate Federal hunting season for muskrat on Federal public lands within Unit 20 remainder.* This regulation will be to add a hunting season for 25 muskrat for Denali National Park and Preserve between November 1 and June 10.

Federal Subsistence Registration Permit Hunts

Denali staff managed the Federal Registration Permits for subsistence hunting of moose and caribou on park lands in Wildlife Management Unit 13E near Cantwell, and moose hunts on preserve lands in Unit 16B. A total of 62 caribou permits and 34 moose permits were issued for 13E, and no moose permits were issued in Skwentna for 16B. Permit applications were advanced to the Fish and Wildlife Service and permit data was stored in a park database.

Monitoring Subsistence Fisheries in Northwest Denali

The goal of this two-year project is to generate data for fish distribution and abundance, beaver dam density, and regional lake surface area dynamics. To date no monitoring programs have been initiated to examine status and trends in beaver activity or lake surface area dynamics in the northwest portion of Denali National Park and Preserve. The objectives of this project are to fill these data gaps using a combination of traditional ecological knowledge, aerial surveys, remote sensing, and fish sampling.



Outcomes for FY 10 included aerial surveys which identified 5 fishing locations that local subsistence users have noted where fish abundance had declined. Additionally beaver dams were located and mapped. The final report will be completed in 2011.

RESOURCE AND VISITOR PROTECTION

North District

John Fish transferred from Death Valley National Park to serve as the new Deputy District Ranger. Jenny Yeager-Fish from Death Valley NP and Trouper Snow from Joshua Tree NP transferred to ranger positions at headquarters. Backcountry ranger Scott Pariseau transferred to the U.S. Fish and Wildlife Service in Minnesota. Wonder Lake Ranger Cody Cole accepted a promotion and transfer to Lake Mead NRA. Jennifer Raffaelli was appointed as the park kennels manager. Beginning in FY 11, the kennels operation will be transferred to the Division of Interpretation.

Significant incidents:

- October 2009 - a four-place Cessna aircraft crashed in the East Fork drainage of the Toklat River, killing a well-known privately-funded research biologist and triggering a two-day search by rangers and the Civil Air Patrol.
- May - a jet-powered boat capsized in Birch Creek and three occupants required rescue by rangers using the park helicopter.
- May - Rangers investigated after a grizzly bear was shot and killed on Tattler Creek after charging two hikers. One visitor was found to have been carrying a loaded handgun pursuant to state and federal law.
- July - rangers recovered the body of a Swiss backpacker who drowned after she and a male friend attempted to cross the Teklanika River on the Stampede Trail by foot.
- August - a multi-engine cargo plane enroute from Palmer to the Arctic coast crashed near park headquarters, killing three people on board and sparking a small wildland fire.
- August - several ranger division personnel and the contract A-Star B3 helicopter traveled to Katmai National Park to assist with the search for a missing aircraft with NPS personnel on board.
- August - major search effort was launched for an overdue day hiker, last seen near the Eielson Visitor Center. The hiker was located near the Toklat River, tired and hungry, but in good condition.



August plane crash site east of C-Camp

Other:

One of two park ambulances was replaced this year with a new model constructed by Wheeled Coach, Inc. of Florida on GSA contract. The ambulance comes equipped with several features designed for the unique challenges of the park, including auxiliary patient compartment heat, automatic tire chains, and a winch.

A reorganization of the ranger services team within the regional office meant that the park took responsibility for working directly with the US Attorney's office and the Office of the Solicitor to manage the court docket for Denali cases.

Road Lottery

The park received 10,061 road lottery pass requests, with the majority, 7,536, done via the pay.gov website. The weather was unprecedented in anyone's memory – it was completely clear, with the mountain visible all day for four days, with temperatures in the 60s and no wind. Staff were working the road lottery in short-sleeved uniform shirts. The weather may have contributed to the high visitor turnout – 1434 vehicles traveled the road during the four days, the highest number recorded (vehicle numbers only available since 1997).

South District

South District mountaineering staff responded to 15 major search and rescue incidents in the Alaska Range during the 2010 season. Two fatal climbing falls occurred on Mt. McKinley, including a French climber on the West Buttress route and a Belgian climber on the Cassin Ridge. An avalanche in the Ruth Gorge claimed the lives of a Canadian and an Israeli climber in late May. Six of the other major SAR incidents involved high altitude illness, including five serious cases of pulmonary edema and one patient with cerebral edema. Mountaineering rangers also rescued and/or treated patients suffering from kidney stones, a dislocated shoulder, vomiting, cracked ribs, and a cardiac emergency. In a rare event, a CH-47 crew from the 16th Combat Aviation Brigade out of Ft. Wainwright in Fairbanks provided mutual aid in the evacuation of a mentally unstable climber from the 14,200-foot camp.

A skilled crew of volunteer mountaineering rangers greatly contributed to the success, enjoyment, and safety of the 2010 season. Over 10,000 volunteer hours were worked by 46 Volunteers-In-Parks (VIPs). For the second year in a row, Denali National Park hosted mountaineering volunteers from the Himalayan climbing community, Chhewang Nima Sherpa and Ningma Tsering Sherpa. Subsequently, Chhewang, a veteran mountain guide with 19 Everest summits to his name, tragically died in October 2010 while guiding on Mt. Baruntse in the Himalayas.

Denali initiated a new 120-day helicopter contract with Temsco Helicopters out of Ketchikan, Alaska. A-Star B3 pilot Andy Hermansky and mechanic Kirt Petterson quickly became an invaluable part of the Denali mountain rescue team, as well as a key component of the parkwide aviation program. Mountaineering rangers Joe Reichert and John Loomis took over the Helicopter Manager role during the contract, contributing to an efficient and accident-free season.

Denali mountaineering rangers Coley Gentzel and Matt Hendrickson graduated in February 2010 from the Federal Law Enforcement Training Center in Glynco, Georgia. Following graduation, they honed their law enforcement skills during rigorous 12-week field training assignments at Grand Canyon National Park and Golden Gate National Recreational Area. Desperately missing the snow, the two commissioned rangers returned to Denali just in time to lead the final high mountain Denali patrol of the 2010 season.

Longtime Denali mountaineering ranger Roger Robinson, developer of the park's Clean Mountain Can program, coordinated an international conference on remote human waste management held in July 2010 at the American Alpine Club headquarters in Golden, Colorado. As Conference Chairperson for "Exit Strategies: Managing Human Waste in the Wild", Roger brought together government and non-profit agencies and individuals from all over the globe to share ideas and develop solutions to human waste management in all realms of backcountry terrain. Event sponsors included the National Park Service, U.S. Public Health Service, Bureau of Land Management, U.S. Forest Service, Alpine Club of Canada, Leave No Trace, the Access Fund, Outward Bound, and the American Alpine Club.



Ranger Roger Robinson explaining how to use a CMC

Communications Center

After six years in the planning stages, the park received a \$420,000 base increase in FY10 to establish the Alaska Region Emergency Communications Center. This converted the Denali Dispatch Office into a year-round, 24 hour per day operation to provide

dispatch services to all Alaska NPS units. Center staffing consists of a GS-09 supervisor, GS-08 lead dispatcher, and five GS-07 dispatchers.

Kennels

The park kennels continued to support special projects throughout the park as they logged over 2,000 patrol miles over the course of the winter. Teams hauled 10,000 pounds of lumber (a total of 35 loads) up Riley Creek for the new pedestrian bridge. Several of the support timbers were more than 20 feet long and weighed over 1000 pounds each, which required up to 16 dogs to haul. Teams hauled 2½ tons of debris off the Toklat River in 15 loads. Over the duration of this project (three winters worth) the dogs hauled 80 loads consisting of almost 13 tons of debris. In February 2010 dog teams supported Kessler Woodward for his stay at the East Fork Cabin as the park's first winter Artist-in-Residence.



Sled dogs hauling materials for Riley Creek footbridge

Winter volunteers Anna McCarthy and Emily Iacobucci each contributed more than 800 volunteer hours between October and February. They were converted to paid staff at the end of last winter due to staffing changes. Three male puppies were born to the park kennels this summer, and a fourth (a female) arrived in the fall from a kennel in Eagle, Alaska.

Backcountry Operations

Four VIPs assisted the backcountry operation by acting as observers during the peak hunting season. These men lived at the Sushana and Upper Windy cabins (and one backpacked to the Foggy Pass area) for up to eleven days. They reported suspicious activities, cleaned and inventoried cabins, hauled and split firewood, and checked boundary marking. Three of the VIPs were from Fort Wainwright, which enhanced the park's relationships with military partners.

Staff made three patrols with the new boat in the Lake Minchumina area. The time spent in the vicinity provided ranger staff with the opportunity to expand relationships with residents and improve NPS knowledge of the area, which is lightly visited.

Using a combination of helicopter and fixed-wing aircraft, staff flew 26 days during August and September to support hunting patrols. They also conducted other patrols via ATV and foot during hunting season. Staff made a case for driving an ATV inside the Wilderness portion of the park and hunting within the Wilderness (no animal taken) and investigated three subsistence hunters from Cantwell for possibly riding ATVs off designated trails.

Other tasks accomplished during the course of the year included marking boundaries more thoroughly in some areas, conducting snowmachine patrols in previously unpatrolled areas in the southeast portion of the park (Tokositna and Kahiltna) and in the lower East Fork area.

Wilderness Management

The Backcountry Information Center was staffed by six general park rangers who divided their time between assisting visitors with backcountry permits and patrolling the backcountry areas of the park. Staff began compiling observations of recreational human use impacts in the backcountry into the park's GIS system. This data will be used to determine compliance with indicators and standards outlined in the Backcountry Management Plan.

Joe Van Horn, the park's wilderness coordinator and one of the park's few long-term memory banks, focused his efforts on completing existing projects this year, as he will be retiring in 2011. He served as a team member on a regional work group tasked with developing more consistent ways to evaluate the possible impacts and benefits of science projects in wilderness. A significant amount of time was spent this year on an ANILCA 1110 b access request from Steve Skjegstad for ORV use across park lands along the northeast boundary to reach his private property adjacent to the park.

INTERPRETATION

East District Highlights

Despite lower numbers of people stopping at park visitor centers, visitor attendance at interpretive programs was up slightly over 2009 figures. The park hired an interpretive park ranger with skills in American Sign Language. Over an eight week period, 20 deaf

visitors were provided interpretive services at dog demonstrations, trail walks, and at the visitor center front desk. A short sign language video was filmed and posted on the park's website welcoming and informing deaf visitors about opportunities and services available to them.



Park ranger and sign language interpreter Rick Pope

West District Highlights

New in 2010, interpretive rangers conducted programs at the private lodges on a limited basis. Additionally, lodge guests attended Wonder Lake Campground programs. The Kantishna Experience will continue in 2011, and staff are exploring adding a second bus.

With increased staffing of experienced GS-07's, 89 more discovery hikes were conducted in 2010 in both East and West Districts, with 1,321 hikers enjoying the wilderness as compared to 996 in 2009.

South District Highlights

A new thematic program was presented at the Talkeetna Historical Society Museum entitled "Climbing Denali: Can You Succeed?" The program divided audience members into two roped teams, each of which were challenged to make decisions as the team was

“guided” up their vicarious ascent of Mount McKinley. During their “climbs”, each team was given background information actual climbers would possess and use in their attempted on Denali. Exit remarks by audience members indicated a very positive reception to the program, as well as increased insight into the minds of mountaineers.

Non-Personal Services

AV Accessibility Project: Three park films and two video exhibits were digitally re-mastered with open captions. Audio description tracks were scripted, recorded and added to offerings made available for sight-impaired visitors. A completely new audio system, which includes new outdoor assisted-listening capacity, was engineered and installed at the historic park kennels. Staff also filmed a brand new HD-resolution introduction for an acclaimed park-produced film that plays regularly at the Wilderness Access Center, *Across Time and Tundra*.

Bulletin Board Replacement: After more than a decade in the works, the park received and began installing new bulletin board cases and structures. “Tri-kiosks” with painted metal posts were installed at the park’s winter camping Bear Loop at the Riley Creek Campground, the entrance to the Winter Visitor Center/MSLC, the new Mountain Vista Rest Area, and the east turnaround parking area at the Savage River. For sites west of Savage River, a design for structures with wood posts was devised by a Special Projects Crew carpenter. They will be installed in spring 2011.

Brochure Re-Design: Editorial and design efforts continued with publications production staff at the Harpers Ferry Center for the first redesign of the “Unigrid” park brochure in upwards of 25 years. Park staff contributed valuable suggestions and comments, from which park management narrowed priorities and set direction for further development. Author Kim Heacox has been retained to begin crafting copy in the coming year. A first printing of the new brochure is likely for the 2012 visitor season.

On-line Videos: Six new online videos were posted this year on the park website and park’s storefront in iTunes, “Denali: New Expeditions”.

Extensive multimedia and web assistance for SITK and ALEU: Information assistant filled a two-week detail in person at SITK, followed by nearly twelve months of periodic, remote assistance, as that park prepared for their centennial celebration. Duties included updating and maintaining SITK website in relation to centennial events; designing and editing graphics and photos for centennial events; and helping with IT-related questions. Information assistant provided extensive assistance (approximately 80 hours) to ALEU, as that site continues to better develop their web content. ALEU has very limited staff, but tremendous public interest in the story of the park, particularly among veterans who served during WWII in the area; the partnership between DENA and ALEU should continue into 2011, as ALEU continues to provide content for DENA’s information assistant to upload to the web.

FMSS Data Collection and Entry: The park hired and trained a clerk in the summer to gather empirical data and create a valuable inventory of all interpretive media exhibits and support structures using the Facility Management Software System (FMSS). The

NPS now mandates that future fund requests to repair and maintain interpretive exhibits be previously inventoried and assessed fully in FMSS. More than 800 data collection sheets were created for all exhibits throughout the park this summer – from waysides at Wonder Lake to a seven-foot synthetic moose in the Denali Visitor Center – and work continues to enter this baseline information into the park’s existing FMSS database. Additional efforts will be necessary in the coming year to rank these assets, calculate projected replacement costs, and flush out condition assessments according to ongoing FMSS requirements.

Social Media: There are now approximately 1750 followers to the park’s Twitter feed, just over a year after joining the social networking site. The park has also launched pages on Facebook and YouTube.

Trail Guides Project: Project funding allowed the park to hire a GS-11 term STF media specialist to complete discreet media products over the next four years. This first year the media specialist worked on seven trail guides that will be produced in cooperation with Alaska Geographic. All guides will be available on the park website, and also available as a downloadable .pdf. The guide for the McKinley Station trail will be multi-media with video and additional features.

Education Programs

Emulating a successful program offered in the park’s northside, South District education staff teamed with University of Alaska Fairbanks to initiate the ALISON Project on Tigger Lake in Talkeetna Lakes Park. The observations were collected as a pilot study to investigate how local students might engage in and learn from this program. The hope is to bring local home-school students and local elementary school students to the site to collect data the winter of 2010-2011.

Teacher-to-Ranger-to-Teacher Program: The MSLC coordinated a portion of the Alaska Region TRT Program at WRST, KLGO, and DENA. Some highlights of this program include:

- WRST hired three TRTs to conduct outreach and interpretation. One TRT from Chicago was the lead teacher for the park’s first “May Creek Diversity Camp,” a weeklong event held in the park’s remote location of May Creek where students spent time learning about wilderness in a place-based setting. Another TRT from New York was the lead ranger at the McCarthy/Kennecott information center. The third TRT, also from New York, was lead for the summer Junior Ranger programs, which created seven curriculum-based programs to be used in the future by other park rangers.
- FAPLIC recruited their TRT with the enticement of a *free* MSLC Seminar at Denali. The FAPLIC TRT attended the Large Mammals course.
- TRT for Denali hosted the local storytime in uniform, implemented a new roving kids cart, solicited/awarded proposals for the “MSLC DBSD Mini-Science Grant” and helped greatly with Denali Discovery Camp.

Education Partnership Programs

Denali-Susitna Exploration Camp: Although this year was the program's sixth season, for the first time, participants actually traveled into Denali National Park and Preserve. This year the program began locally with a day hike at Talkeetna Lakes Park, followed by a rainy second day hiking around Byers Lake in Denali State Park. During the last three days, the younger participants were joined by six high school-aged YCC members and their leaders from the Upper Susitna Soil and Water Conservation District. The entire group traveled to Denali and stayed at the MSLC Field Camp. Two NPS educator interpreters joined them for three more rainy days of experiencing the ecosystems and protected lands in their own backyards.

Centennial Challenge Project: Denali teamed with Cedar Breaks National Monument, Southern Utah University, the National Collegiate Honors Program and UA Fairbanks to host the Centennial Challenge Project, Partners in Parks. The park experience provided college honors students from across the nation with little previous experience with national parks and with cultural and economically diversity backgrounds, the opportunity to experience Denali's environs with the promise develop an ongoing relationship with parks closer to their homes. The group of 16 hiked, camped, attended backcountry seminars, and participated in a citizen science project while learning about the park's natural and cultural history. As a result of this program, the Partners in Parks program is changing their model with future parks to reflect their Denali experience.

GSA GeoCorps GeoHeritage VIP: For the first year, the MSLC hosted a geoheritage intern. This VIP focused on creating a Geology Guide for interpreters and geocaches.

Special Events, Programs and Recognition

Winterfest - February 22-28: The tenth annual Winterfest activities were enjoyed by hundreds of residents and visitors spread across four communities and the national park, and along eighty miles of the Parks Highway. Key partners in this annual event included the Denali Chamber of Commerce, Doyon/ARAMARK Joint Venture, Denali Borough, Denali Borough School District, Alaska Geographic, Denali Education Center, and Princess Tours. Highlights of the event included:

- Wally and Jerryne Cole's program on, *Three Generations of Camp Denali: Connecting People to the National Park.*
- Two-day quilt show and silent auction hosted by the Tri-Valley Community Library in Healy
- Park activities, including Denali Geo-Ventures, a GPS scavenger hunt, children's cross-country skiing, and a winter backcountry safety information and avalanche rescue beacon interactive course provided by the newly formed Denali Emergency Rescue Team
- Healy performance of the 45-voice Fairbanks Summer Arts Festival Winter Edition Gospel Choir

Chicago Children's Choir: As a member of the Denali Arts and Humanities Alliance, the park partnered with several local organizations to host the Chicago Children's Choir

for a visit and a performance. The evening performance, offered free of charge at the Denali Visitor Center, played to a packed house.



Chicago Children's Choir performing at Denali Visitor Center

Artist-in-Residence Program: In 2010, the park hosted four visual artists and one writer in its AIR Program. Program advisor Kesler Woodward became the first winter artist in the program when he skied out to the East Fork Cabin in February with support from the park kennels. Summer visual artists included sculptor Richard Fruth, mixed-media artist Kirsten Furlong, and metalsmith Harlon Butt. Nancy Lord, Alaska's Writer Laureate, was the invited writer.

Given the opportunity by the Crabb Family to display for the first time an almost complete collection of artist Ree Nancarrow's early silk screen prints, the park partnered with the Denali Education Center to facilitate the matting, framing, and hanging of the prints, which were available for viewing throughout the summer season. This year the management of the Artist-in-Residence program transitioned from Alaska Geographic to the term park media specialist.

Ascension Exhibition: Artist-in-Residence Program: *Ascension: Exploring the Art of Denali*, an exhibition of Denali's artist-in-residence work, was on display at the University of Alaska Museum of the North, October 2009 - January 2010 in conjunction with the showing of *The National Parks: America's Best Idea*. This program was offered in partnership with Alaska Geographic and University of Alaska Museum of the North.

VIP Program Management: In 2010 Denali saw an increase of volunteers and hours donated as a result of stimulus funding and expanded SCA crews. The park had 410 VIPs in 2010, up 65 people from 2009. Volunteer hours totaled 51,139, almost 10,000 more

hours than the previous year. As of October 1, 2010, the coordinator position moved to the administrative division and will act as the regional and park program manager.

Alaska Region Freeman Tilden Award: For her work on the *Ascension* exhibition of Artist-in-Residence artwork, the Chief of Interpretation was the Alaska Region winner of the Freeman Tilden Award. The award acknowledges outstanding effort in the field of interpretation and education.



Ingrid Nixon, Chief of Interpretation

CONCLUSION

The construction had an impact on all park operations, and thanks to the advance planning and hard work of a skilled workforce, the effect on park visitors was mostly mitigated. But seasonal employees in C-Camp continued to live in an active construction zone and employee morale and other issues associated with the negative impacts of the construction provided challenges for park management and supervisors. It is of some solace to know that future seasonal employees will enjoy a comfortable, appealing, and safe residential area.

The park will continue advocating for cooperation with the State of Alaska on significant wildlife management issues. In October 2009 a state measure went into effect that would allow the taking of bear sows and cubs in dens and the use of artificial light in a portion of the Denali National Preserve. The NPS determined that this new hunting practice was inconsistent with park purposes and values, and in April 2010 prohibited those methods for taking bears in the preserve.

The park will continue dialog with the state to add protection to the three most viewed park wolf packs. Park wolves for the most part show little fear of humans, and are more vulnerable to being trapped when they move outside the park. In the past three years a small number of trappers (2-3) have taken 28 wolves in the area that was proposed for closure. The potential of increased loss of wolves to trapping has park managers concerned about the ability to maintain a natural and healthy population of wolves, and provide opportunities for visitors to enjoy viewing them

Appendix 1

FY2010 Human Resources Report

| Promotion From | New Grade/Position | Incumbent | Comments |
|------------------------------|-------------------------------|------------------|-----------------|
| GS-5 ADMIN SUPPORT ASS'T | GS-6 ADMIN SUPPORT ASS'T | BELTRANO | |
| GS-9 CONCESSIONS MANAGE SPEC | GS-11 CONCESSIONS MANAGE SPEC | BURCH | |
| GS-7 FEE & BUSINESS MANAGER | GS-9 FEE & BUSINESS MANAGER | LEBEL | |
| GS-5 DISPATCHER | GS-7 DISPATCHER | COOPER | |
| GS-5 DISPATCHER | GS-7 DISPATCHER | MCALOON | |
| GS-5 DISPATCHER | GS-7 DISPATCHER | FITCH | |
| GS-5 DISPATCHER | GS-7 DISPATCHER | PACE | |
| GS-7 PARK RANGER (KENNELS) | GS-9 PARK RANGER (KENNELS) | RAFFAELI | |

Vacancies Created

| Vacancies Created | Office | Vice | Comments |
|-------------------------------|---------------|-------------|-----------------|
| GS-5/6 SECRETARY | SUPT | CISSE | |
| GS-4/5 ADMIN SUPPORT ASS'T | ADMIN | ADAMS | |
| GS-5/6 ADMIN SUPPORT ASS'T | ADMIN | SIMPSON | |
| GS-5/6/7 BUDGET TECH | ADMIN | FIELDING | |
| GS-12 CONCESSION MGANAGE SPEC | CONC | SISSON | |
| GS-5/6/7 BUDGET TECH | MAINT | SAUVEY | |
| GS-7/9 FMSS SPEC | MAINT | PEARSON | TERM |
| GS-4/5 ADMIN SUPPORT ASS'T | MAINT | HOUSTON | TERM |
| GS-5/6 FMSS ASS'T | MAINT | PAXTON | TERM |
| GS-13 FACILITY MANAGER | MAINT | SCHOLTEN | RETIRE |
| GS-12 ENGINEER | MAINT | SCHOLTEN | |
| WG-10 EQUIPMENT OPERATOR | MAINT | GROSNICK | RETIRE |
| WG-10 EQUIPMENT OPERATOR | MAINT | TAYLOR | RETIRE |
| WS-10 MAINT MECHANIC SUPV | MAINT | GOMEZ | |
| WS-7 MAINT WORKER SUPV | MAINT | TOMKIEWICZ | |
| GS-4/5 ADMIN SUPPORT ASS'T | RESOURCES | BURNELL | |
| GS-12 GEOLOGIST | RESOURCES | BREASE | R.I.P. |
| GS-9 CURATOR | RESOURCES | LAKEMAN | |
| GS-11 ARCHEOLOGIST | RESOURCES | KARCHUK | |
| GS-7 PHYSICAL SCIENCE TECH | RESOURCES | YOCUM | TERM |
| GS-9 DISPATCHER SUPV | RANGERS | FIELDING | |
| GS-5 DISPATCHER | RANGERS | ADAMS | |
| GS-7 DISPATCHER | RANGERS | COOPER | |
| GL-9 PARK RANGER (PROT) | RANGERS | COLE | |
| GL-9 PARK RANGER (PROT) | RANGERS | PARISEAU | |
| GL-9 PARK RANGER (PROT) | RANGERS | O'CONNOR | |

Vacancies Filled

GS-5/6 ADMIN SUPPORT ASS'T
 GS-5/6 ADMIN SUPPORT ASS'T
 GS-4/5 ADMIN SUPPORT SPEC
 GS-11 ENVIRONMENTAL PROT
 SPEC
 WG-10 ELECTRICIAN
 WS-10 MAINT MECHANIC SUPV
 GS-7/9 FMSS SPEC
 WG-4 CUSTODIAN
 WG-9 USRO
 GS-11 ENGINEER
 GS-9 PARK RANGER
 GS-9 PARK RANGER
 GS-11 PARK RANGER
 GS-7 BIO TECH
 GS-11 ARCHEOLOGIST
 GS-9 FORESTRY TECH
 GS-11 ECOLOGIST
 GS-5 DISPATCHER
 GS-5 DISPATCHER
 GS-11 PAR RANGER (PROT)
 GS-7 PARK RANGER (KENNELS)
 GL-9 PARK RANGER (PROT)
 GL-9 PARK RANGER (PROT)

Office

ADMIN
 ADMIN
 ADMIN
 PLAN
 MAINT
 MAINT
 MAINT
 MAINT
 MAINT
 MAINT
 INTERP
 INTERP
 INTERP
 RESOURCES
 RESOURCES
 RESOURCES
 RESOURCES
 RANGERS
 RANGERS
 RANGERS
 RANGERS
 RANGERS
 RANGERS

Incumbent

BELTRANO
 BURNELL
 SMITH
 HOMAN
 FITCH
 HERGENRIDER
 SAUVEY
 THOMAS
 VAN DYKE
 WISE
 BEAVERS
 IRELAN
 RAINS
 BORG
 DANIELS
 GARCIA
 SNOVER
 COOPER
 FITCH
 FISH
 RAFFAELI
 SNOW
 YEAGER-FISH

TERM
 TERM
 TERM
 TERM
 SCEP
 TERM

Perm: 96
Term: 26
SCEP: 2

Appendix 2
2010 Financial Summary

SUPERINTENDENT

| | |
|---|------------------|
| ONPS | 1,281,700 |
| CFF 80%: Correct Latent Defects Associated with the Construction of the EVC | 66,800 |
| General Donations | 40,500 |
| Road Lottery SUP | 3,700 |
| TOTAL, SUPERINTENDENT | 1,392,700 |

PLANNING

| | |
|---|----------------|
| ONPS | 307,200 |
| CFF 80%: FACA-Chartered Advisory Group Coordination | 26,200 |
| Federal HWY: Transit Study | 323,000 |
| TOTAL, PLANNING | 656,400 |

ADMINISTRATION

| | |
|--|------------------|
| ONPS | 1,709,800 |
| Rec Fee 80%: Convert Denali's Telephone System VOIP | 21,000 |
| Rec Fee 80%: Upgrade Toklat Communications | 67,000 |
| CFF 80%: Fire Suppression for Critical IT Resources | 40,000 |
| CFF 80%: Eielson Visitor Center Telephone and IT Systems Upgrade | 8,000 |
| CFF 80%: Guest Network Services Consolidation and Expansion | 36,300 |
| CFF 80%: Ensure Survivability of IT Server Infrastructure | 54,000 |
| Road Lottery SUP | 3,500 |
| TOTAL, ADMINISTRATION | 1,939,600 |

CONCESSIONS

| | |
|---|------------------|
| ONPS | 163,100 |
| Rec Fee 80%: FY2010-Cost of Collections-Operations | 294,500 |
| CFF 80%: Manage Concessions Special Accounts | 131,500 |
| CFF 80%: Professionalize Conc Mngmt | 30,000 |
| Paul S. Sarbanes Transit in Parks Program (TRIP-formerly ATPPL) DENA Hybrid Bus Project | 435,000 |
| Road Lottery SUP | 1,300 |
| Cost Recovery: CUA Holders Incidental Business Permit | 3,600 |
| TOTAL, CONCESSIONS | 1,059,000 |

INTERPRETATION

| | |
|------|-----------|
| ONPS | 1,223,500 |
|------|-----------|

| | |
|--|------------------|
| Rec Fee 80%: Protect Artist in Residence Artwork | 10,000 |
| Rec Fee 80%: Repair Visitor Center Displays | 16,500 |
| Rec Fee 80%: Self-Directed Learning Opportunities | 167,200 |
| Rec Fee 80%: Cantwell-Denali Community Education | 100,000 |
| Rec Fee 80%: Partnership Education Network | 100,000 |
| Rec Fee 80%: Maintaining Critical Supplies of Park Brochures | 6,200 |
| Rec Fee 80%: Improve AV Accessibility Park Films | 127,400 |
| CFF 80%: Concessioner-Run Ticketing Facility | 43,100 |
| CFF 80%: Improve Partner Interpretation Through Increased Training Coaching and Evaluation | 151,000 |
| CFF 80%: Media to Ensure High Quality Visitor Learning | 55,400 |
| Junior/Web Ranger Program: Renovating Jr Ranger Program | 9,900 |
| Challenge Cost Share - Region: Increaseing Science and Science Education | 18,600 |
| Youth Partnership Program: Teacher to Ranger to Teacher Program | 22,700 |
| Youth Partnership Program: Encourage Family Visits to Denali | 22,000 |
| DENA VIP Program | 28,700 |
| Provide Interpretive Programs to Hotels | 47,000 |
| Kantishna Experience | 50,200 |
| Road Lottery SUP | 60,500 |
| TOTAL, INTERPRETATION | 2,259,900 |
| MAINTENANCE | |
| ONPS Flex Base: Cantwell Disturbed Lands | 133,000 |
| ONPS | 4,297,200 |
| Rec Fee 80%: Wonder Lake Campground Water System-Design & Well Drilling | 52,000 |
| Rec Fee 80%: Evaluations of High Priority Assets Utilizing FMSS | 60,000 |
| Rec Fee 80%: Replace 8 SSTs at Tek Rest Stop | 475,900 |
| Rec Fee 80%: Tek Rest Stop Toilets | 1,492,500 |
| Rec Fee 80%: Rehab Roadside Trail | 39,600 |
| Rec Fee 80%: Thorofare Trail Drainage Repair | 30,400 |
| Rec Fee 80%: Savage Alpine Trail Maintenance | 62,400 |
| Rec Fee 80%: Triple Lakes Trail Work | 6,400 |

| | |
|--|---------|
| CFF 80%: Construct Winter Recreation Storage Facility | 45,500 |
| CFF 80%: Design, Survey & Engineering for VIP RV Unit | 34,800 |
| CFF 80%: Construct Leachfield in Bus Shop Area | 182,600 |
| CFF 80%: Design CLA Maintenance Shop | 181,400 |
| CFF 80%: CLA Water Lines | 529,700 |
| CFF 80%: CLA Water Lines | 425,100 |
| CFF 80%: Design Approximately One-half Mile of Emergency Access Road | 18,200 |
| CFF 80%: Clear Approximately One-half Mile of Vegetation for Road Corridor | 16,200 |
| CFF 80%: Construct Emergency Road Access | 30,300 |
| CFF 80%: Construct Final Wastewater Construction | 157,800 |
| CFF 80%: Addition to IT Building | 218,400 |
| CFF 80%: Provide Engineering Oversight of Special Account Construction Projects | 96,700 |
| CFF 80%: Reroute Triple Lakes Trail (Northside) | 378,600 |
| CFF 80%: Rehabilitate Power House | 30,000 |
| CFF 80%: Construct Paved Road and Gravel Pads for 6 RV Camping Pads | 385,800 |
| CFF 80%: Construct Paved Road / Six Gravel Pads for VIP RV Units /w Utility Hook Ups | 81,100 |
| CFF 80%: Mitigate Dust on the Denali Park Road 2010 | 283,400 |
| CFF 80%: ADEC Rest Room/Showerhouse-Trails Camp | 86,500 |
| CFF 80%: Const Contingency/inflation adj/leachfield | 267,700 |
| CFF 80%: Const Contingency/inflation adj/winter water supply | 162,300 |
| CFF 80%: Const Contingency/inflation adj/winter wastewater system | 26,800 |
| Cultural Cyclic Maintenance: Historic Restoration, Lower Toklat Patrol Cabin | 118,600 |
| Cultural Cyclic Maintenance: Cyclic Painting of Historic Building | 26,800 |
| Recovery Act: Wonder Lake Maintenance Shop & Cabin Maint. | 40,000 |
| Recovery Act: Rehab Comfort Station & Campground | 46,300 |
| Recovery Act: Repair Wonder Lake Ranger Station Sewer Line | 14,300 |
| Recovery Act: Improve Energy Efficiency at AutoShop | 50,300 |
| Recovery Act: Perform Energy Audits | 57,000 |

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| Recovery Act: Replace Onan 125 KW Generator | 63,600 |
| Recovery Act: DENA day labor Relocate ES & LE Services | 44,200 |
| Recovery Act: DENA Front Country WWTF Net Construction | 5,444,800 |
| Recovery Act: Frt Crty WWTF PLNG/DSG/COMP | 65,000 |
| Recovery Act: DENA Front Country WWTF Project Supervision | 546,000 |
| Recovery Act: Repair Surfaces of Trails | 9,100 |
| Recovery Act: Rehabilitate Savage Alpine Trail | 305,700 |
| Regular Cyclic Maintenance: Paint Exterior-Park Rd Visitor | 16,700 |
| Regular Cyclic Maintenance: Replace Carpet in B&U Building | 17,100 |
| Regular Cyclic Maintenance: Install Food Storage-Bear Safe | 33,900 |
| Regular Cyclic Maintenance: Paint Exterior HQ Housing Unit | 41,600 |
| Regular Cyclic Maintenance: Rehab Gravel Rd Surface-Denali | 352,500 |
| Regular Cyclic Maintenance: Re-Stripe 15 Miles on DENA Rd | 28,000 |
| Regular Cyclic Maintenance: Gravel Scrape-Toklat River | 115,700 |
| Regular Cyclic Maintenance: Brushing 92 Miles-Denali Road | 135,600 |
| Regular Cyclic Maintenance: Maint. & Renewal-Taiga Trail | 18,600 |
| Regular Cyclic Maintenance: Maintain Trails | 62,000 |
| Regular Cyclic Maintenance: Replace Tread in Trails | 44,000 |
| CRPP - Historic Structures Stabilization: Cyclic Maintenance for Pearson Cabin | 49,600 |
| Regular Cyclic Maintenance: Install dust collection system | 73,900 |
| Emergency and Unscheduled (Construction): Seismic Rehab of Various Buildings | 100,000 |
| Housing Initiative - Trailer Replacement and Removal: Replace C-Camp Cabins 181-182 | 126,900 |
| Repair/Rehab: Demo / Removal of Obsolete Riley creek and Horseshoe Pumphouses | 16,000 |
| Repair/Rehab: Parker Cabin Log Foundation Repair, Denali National Park | 74,700 |
| Repair/Rehab: Rehab Interiors, Correct Code Deficiencies, Units B169, B170, B99 | 33,600 |
| Repair/Rehab: Rehab Mission 66 Housing B-26 | 9,500 |
| Repair/Rehab: Upgrade SCADA Utilities Control System | 25,200 |
| Repair/Rehab: Replace Failed Glycol Lines to Kennels | 11,500 |
| Repair/Rehab: Rehab 2 Campground Amphitheaters | |

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| | 50,000 |
| Repair/Rehab: Rehab c-camp Seasonal Housing | 440,000 |
| Repair/Rehab: Upgrade High Voltage Electric | 107,000 |
| Repair/Rehab: Correct Health & Safety D-Toklat | 60,000 |
| Line Item Construction: Savage Rest Stops Day Labor | 425,500 |
| Federal Lands and Highways Program: Correct Dangerous Rd Shoulders | 238,800 |
| Federal Lands and Highways Program: Rehab Park Road Miles 80-84 | 72,700 |
| Federal Lands and Highways Program: Replace Culverts Miles 15-92 | 514,800 |
| Construction: DENA HQ Utilidor Design | 307,700 |
| Construction: DENA HQ Utilidor Pre Design | 310,000 |
| Construction: DENA HQ Supplemental Services | 125,000 |
| Recycle Program | 600 |
| Reimbursable Utilities | 2,800 |
| GSA reimbursable | 227,500 |
| Concession Utilities | 308,600 |
| Concessions Rest stops | 207,600 |
| Road Lottery SUP | 35,100 |
| Permanent Quarters | 397,000 |
| Seasonal Quarters | 180,800 |
| TOTAL, MAINTENANCE | 22,518,100 |
| RANGER ACTIVITIES | |
| ONPS | 3,097,000 |
| Rec Fee 80%: Computerized Backcountry Permit and Statistic Program | 32,800 |
| Rec Fee 80%: Snowmobile Survey to Implement BC Plan | 33,200 |
| CFF 80%: FY 2010 High Altitude Camp Transport | 46,300 |
| CFF 80%: Prevent Illegal Hunting to Protect Wildlife Related Visitor Experiences-North Unit | 22,000 |
| CFF 80%: Develop GIS Database to Help Protect Wildlife from Illegal Hunting | 53,800 |
| CFF 80%: Human Waste Management in Glaciated Area | 47,900 |
| CFF 80%: FY 2010 Protect Wildlife from Illegal Hunting | 90,000 |
| CFF 80%: Stop Illegal Guiding on Mt McKinley | 37,600 |

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| CFF 80%: Wildlife Protection Training Video | 32,500 |
| CFF 80%: Survey North Boundary of DENA | 10,000 |
| Youth Conservation Corps: Kennels VUA | 3,200 |
| Youth Conservation Corps: Kennel Intern | 10,300 |
| VIP: Provide Critical Volunteers to Sustain Denali's Mountaineering Program | 9,900 |
| Wildlife Protection Fund | 13,000 |
| Photography Permits | 12,400 |
| Cost Recovery: Mountain Use Fees | 202,600 |
| Road Lottery SUP | 30,000 |
| SAR Donations | 2,200 |
| Kennels Donations | 20,300 |
| Mislow-Swanson Denali Pro Award Donations | 4,500 |
| TOTAL, RANGER ACTIVITIES | 3,811,500 |
| CULTURAL RESOURCE MANAGEMENT | |
| ONPS Flex Base: Upgrade Museum Collection | 115,000 |
| ONPS | 338,800 |
| CFF 80%: Produce Kantishna Mining District Cultural Landscape Inventory and Report | 85,000 |
| CFF 80%: Revitalization of the Denali Park Library | 5,000 |
| CFF 80%: Initiate Cooperative Harvest Monitoring Programs | 20,000 |
| NRPP-Regional Program Block Allocations: Inventory Traplines & Doc Assoc Activities | 42,400 |
| Regional Natural Resources: Monitoring of Subsistence Fisheries | 22,600 |
| TOTAL, CULTURAL RESOURCE MANAGEMENT | 628,800 |
| NATURAL RESOURCE MANAGEMENT | |
| ONPS Flex Base | 817,000 |
| ONPS | 1,333,600 |
| Rec Fee 80% Impacts of Human Waste on Mt. McKinley | 50,000 |
| Rec Fee 80% Upgrade Web pages | 26,700 |
| Rec Fee 80% Enhance Visitor Experience | 8,500 |
| Rec Fee 80% Wetland Restoration Efforts | 36,000 |
| Rec Fee 80% Evaluate Impacts of Changes | 200,000 |
| CFF 80% Develop Digital Record Database-Year 2 | 52,500 |
| CFF 80% Wolf/Caribou Movement Study FY 2010 | 197,500 |
| CFF 80% Develop Methodology for Monitoring Visitor Use-Year 2 | |

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| | 115,500 |
| CFF 80% Assessing Cryptogam Biodiversity from Speciment Collected in DENA | 27,000 |
| CFF 80% Endangered Lichens, Year 2 | 13,500 |
| CFF 80% Toklat Gravel Extraction Monitoring | 35,000 |
| CFF 80% Sound Monitoring | 95,500 |
| CFF 80% Providing Virtual Tours of Landscape Changes in DENA Through Digital Exhibit | 29,000 |
| Wildland Fire: Fuel Management | 123,400 |
| Wildland Fire: KOVA Burn & Monitoring Plan | 4,900 |
| Wildland Fire: NOAT Burn & Monitoring Plan | 4,900 |
| Wildland Fire: LACL Burn & Monitoring Plan | 8,300 |
| Wildland Fire: DENA Hazard Fuels Projects | 101,900 |
| Wildland Fire: DENA Fire Effects Data Entry | 1,300 |
| Wildland Fire: Fire Readiness/Preparedness | 280,700 |
| Natural Resource Preservation: NR Employee Professionalization Enhancement | 3,700 |
| Natural Resource Preservation: Modeling Caribou Habitat | 31,300 |
| Natural Resource Preservation: Inventory Bryophyte/Lichen | 16,200 |
| Natural Resource Preservation: Estimate Dall Sheep Abundance | 24,700 |
| Natural Resource Preservation: Abundance Dist Trumpeter Swan | 11,400 |
| Natural Resource Preservation: Climate Change At-Risk Boreal Forest Birds | 21,500 |
| Natural Resource Preservation: Develop Regional IPM Program | 4,700 |
| Recovery Act: Wetlands Mitigation | 35,000 |
| Federal Lands and Highways Program: Toklat River Infrastructure | 70,000 |
| Federal Lands and Highways Program: W. End Aerial Photography | 60,000 |
| Donation: Thomas Polito Memorial | 1,600 |
| Donation: Replace Bear Proof Containers | 500 |
| Road Lottery SUP | 3,600 |
| TOTAL, NATURAL RESOURCE MANAGEMENT | 3,846,900 |
| TOTAL, ALL FUND SOURCES | 38,112,900 |