



RESOURCE MANAGEMENT NEWS

Summer 2010



A lichen covered rock along the park coastline. Ensuring such sensitive species and habitats are unimpaired is one reason for sustaining our campsite monitoring efforts (page 8).

This year marks the 30th anniversary of the establishment of Kenai Fjords National Park. On December 2, 1980, President Jimmy Carter signed the “Alaska National Interest Lands Conservation Act (ANILCA)”, providing for the creation or revision of 15 national parks in Alaska, as well as National Wildlife Refuges, National Forests, and codifying other public land principles throughout Alaska. At the time ANILCA was contentious, seen as a land grab by the federal government. With the passage of time some of these concerns have waned, others remain. On page 9, one of the very first employees to work in the park, Chuck Gilbert, shares his perspective of early resource management efforts.

Much has happened here at Kenai Fjords over the past 30 years – the Exxon Valdez Oil Spill, fishing booms, and growth of the tourism industry – with the park playing a central role in each. Our work continues to address these issues, the legacy of ANILCA, and to prepare for

emerging concerns such as climate change.

Again this year we are engaged in a wide array of activities; from improving our museum collection practices, and documenting wildlife activity, to improving our understanding of visitor motivation. And of course, summer is a busy season. Snow melts; bears emerge from their dens; work sites become accessible; park staff, partners, and visitors arrive.

This is our third year preparing this newsletter, with each issue a learning experience. The addition of new staff helped speed newsletter preparation, while the departure of friends reminds us of the shoes we strive to fill and footprints we leave. We are pleased to say we had a difficult time choosing from the many ongoing projects to highlight this year. We hope you enjoy reading about our work and look forward to seeing you in the field!

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Bear Management

Bears are common throughout Kenai Fjords National Park, and the opportunity to see a bear in its natural habitat is a highlight for visitors to the park. With this experience, however, comes the potential for impacts on normal bear behavior and conflict between humans and bears. All bears are capable of injuring people or damaging property. This presents a challenge when striving to preserve bears as a component of the ecosystem while providing for public safety.

As a management guide, the park has an Interim Bear Management Plan. The goals of this plan are to:

- Provide for visitor and staff safety by minimizing bear-human conflicts.
- Minimize the effects of human activities on black and brown bear populations.
- Ensure opportunities for visitors to observe and appreciate black and brown bears as a part of an intact ecosystem.

The bear management program consists of proactive measures such as food storage and education, and management actions such as aversive conditioning of bears. All park employees, cooperators, and commercial operators assist in bear management in countless ways: emptying garbage cans, filling out 'Bear-Human Information Management System' forms, and keeping a clean camp. Primary responsibility for bear management in the park lies with Visitor and Resource Protection (VRP) and Resource Management (RM) teams. The Bear Incident Response Team consists of

trained staff from each of these teams.

Bear-human interactions are classified as *encounters* when the bears and humans are aware of each other and as *incidents* when bears respond to the presence of humans with charges, physical contact, or damage to property. For the past two years, the number of incidents reported has been markedly lower than observed in the previous three years.

By understanding the types of bear-human interactions that occur: employees and visitors can improve their understanding of bear behavior and avoid negative interactions. Recommendations include:

- Properly store all food in bear resistant food containers.
- Be aware of bears while hiking and make noise to avoid surprise encounters.
- Do not harass habituated bears by approaching too closely.
- Avoid camping in high use bear areas.
- Keep tents, kayaks, and other gear within sight at all times.
- Be ready to defend your food and gear if a curious bear approaches.

Visitors who encounter a bear should report it to park staff as soon as possible. Park staff will in turn complete a 'Bear-Human Information Management System' form and immediately forward it to the Bear Management Team. This will alert others and enable park staff to respond as appropriate. We look forward to receiving your suggestions and reports of bear encounters!



Black bears in Kenai Fjords.

Wildlife Observations

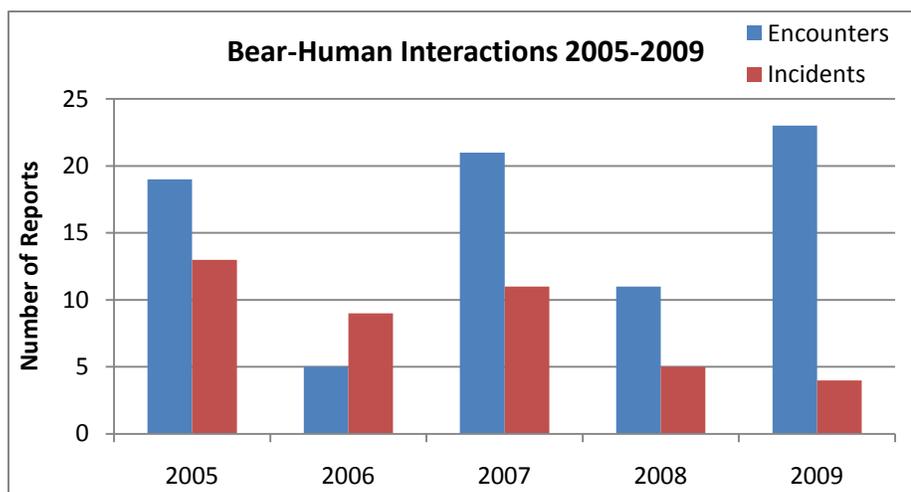
The Kenai Fjords National Park Resource Management Team encourages all park staff and visitors to report unusual or otherwise notable wildlife sightings for documentation in the park's Wildlife Observations database. Opportunistic observations of rare or unexpected wildlife yield valuable anecdotal data on species occurrence, relative abundance and distribution, and contribute to our overall understanding of the natural history of the park. These observations also help document changes in species distribution throughout Alaska.

Many visitors are surprised to find out that there are no reptiles in the park, or that it is rare to see a brown bear along the park coast. If you see any unusual or notable wildlife, or any other unexpected species, please fill out and submit a Natural History Field Observation card available at both the Information Center and Nature Center, or send us an email describing your sighting. We always appreciate photos if you can obtain them without approaching or disturbing the animal.



Coyote on Exit Glacier road, photo contributed by Cathy Headrick.

Last year we received 89 wildlife observation reports from staff and visitors, including an observation of the first bat to be confirmed within the park. Other notable wildlife included a family of coyotes observed throughout the summer at Exit Glacier and a wolverine spotted at the Aialik Bay Ranger Station. We greatly appreciate everyone who takes the time to contribute their observations, and look forward to receiving your reports in 2010.



Exotic Plant Management

This year marks the seventh consecutive year of inventory, monitoring, and manual pulling of exotic plants using Alaska's regional Exotic Plant Management Team protocol. Exotic plant species continue to be a concern in the Exit Glacier area along roads and trails and in outer coastal areas where backcountry visitors access beaches for activities like camping. Areas associated with human activities are often the origins of exotic plant introductions into the park.

Manually removing individual plants is the only method used for exotic plant control in the park and has been a successful strategy for removing several invasive species. Because not all invasive plant species can be eradicated by hand pulling, a regional Invasive Plant Management Plan (IPMP) is being developed to address invasive plant infestations in national park areas throughout Alaska. The IPMP uses a decision flow chart to select appropriate physical (pulling, digging, burial, mowing, cutting, burning, and other heat treatments) and herbicide treatments to eradicate or contain invasive plant infestations. The Environmental Assessment went through public review in April 2008 and again in October 2009, with a final version signed in March 2010.

During the 2009 field season, park staff and volunteers pulled 1,826 pounds of weeds (over 120 garbage bags) in the park. Common plantain, common dandelion, and pineapple weed continue to be the



Removing invasive plants along Exit Glacier road.

most common non-native plant species pulled. In recognition of the annual State of Alaska Invasive Weed Awareness Week, the park in partnership with the Resurrection Bay Conservation Alliance and the U.S. Forest Service, organized a community weed pull outside the park along Exit Glacier Road. Over 1,200 pounds of alfalfa, oxeye daisy, and dandelions were pulled during the event.

Our goals for 2010 include:

- Continue to monitor and treat infested sites in the Exit Glacier area.
- Inventory and monitor for exotic plants on park lands adjacent to the Pedersen Lagoon development and work with the lodge owners to prevent the spread of invasive plants.
- Develop a thorough understanding of grasses in the Exit Glacier area and on the outer coast.
- Continue to inventory and monitor heavily used coastal areas.



Biological Technician Debbie Kurtz surveys for weeds on park coastal beaches.

Glaciers

In 2009 we began monitoring 'mass balance' at 4 sites on Exit Glacier, using plywood, sawdust, electrical conduit, and a few other tools. This low-tech monitoring allows us to track how much snow accumulates in the winter and how much melts in the summer (mass balance is defined as the difference between how much ice accumulates and how much ablates, or is lost). With sites distributed from the bottom to the top of Exit Glacier, we also get a picture of how these processes vary with elevation. In 2010 we will continue this monitoring, and are looking into expanding our efforts to include a representative glacier which terminates in Aialik Bay and another across the icefield in Kenai National Wildlife Refuge. Our long-term goal is to have a better understanding of how individual glacier basins and the entire icefield respond to different climate conditions, as well as prepare for impacts of climate change.



Mass balance monitoring equipment consists of several meters of electrical conduit sunk into the glacier ice. Regular measurements of snow and ice height on this conduit help us track glacier health. The sawdust and plywood identify the ice surface from the previous fall when digging down through a winter's worth of snow.

Other ongoing glacier projects this summer include looking at outburst flood hazards at Bear Glacier and measuring ice thickness and mapping the terrain underlying icefield. These projects are being conducted by university researchers in partnership with NPS staff and we look forward to having some exciting new information available in a year or two.



Exit Glacier monitoring sites as seen from the Harding Icefield trail.

Natural Resources

Seabird Surveys

The Gulf of Alaska supports 26 species of seabirds nesting at almost 700 colonies. Seventeen known colonies are located within the park. Surveys of these colonies have been conducted in cooperation with the Alaska Maritime National Wildlife Refuge since 2007.

Seabirds are indicators of marine ecosystem health and are sensitive to disturbances; these colony surveys allow relative abundance measures of colonies within park boundaries.

In 2009 all colonies within the park were censused during a week-long trip in July aboard the Serac. Seven seabird species (glaucous-winged gull, red-faced cormorant, double-crested cormorant, pelagic cormorant, tufted puffin, horned puffin and common murre) were found to be actively breeding. A similar survey will be conducted in 2010. Preparations will also be undertaken during 2010 for a three-year project to determine the temporal and spatial variability within these colonies.



Tufted puffin in breeding plumage.

The surveys follow a General Agreement between the National Park Service, US Fish and Wildlife Service and the National Oceanic and Atmospheric Administration to increase cooperation between agencies where they share common coastlines and waters, creating a seamless network of coastal refuges, reserves, parks and sanctuaries.



Peale's peregrine falcon in Kenai Fjords National Park.



Bald Eagle Surveys

Bald eagles are found throughout Kenai Fjords National Park with the highest concentrations occurring along the coast. Eagles are keystone predators and serve an important ecological role in freshwater and marine systems.

As we've learned more about bald eagles, we've come to realize that our methods of collecting information need to be updated. To that end, the park conducted bald eagle nest surveys during the summer of 2009 to gather data to design a long-term monitoring program for nest occupancy and productivity (number of chicks fledged from occupied nests). Researchers used a helicopter to survey approximately 500 miles (800 kilometers) of coastline over seven days in May to locate nesting bald eagles. Observers detected 44 active nests with incubating adults or eggs and 36 empty nests. Active nests were located in Sitka spruce (37), mountain hemlock (4), balsam poplar (1), and on the ground (2).

Most of the active nests were close to the water, with 75% found within 65 feet (20 meters) of the shoreline.

In 2010, we will conduct a nesting survey for bald eagles in May and a productivity survey in July—developing monitoring strategies which reduce the amount of effort (helicopter time). This project is a joint effort involving park staff, inventory and monitoring program scientists, and bald eagle specialists with the U.S. Fish & Wildlife Service.



Bald eagle surveys in 2009.

Peregrine Falcons

Peregrine falcons are apex predators of the Kenai Fjords National Park marine nearshore ecosystem, feeding primarily on seabirds such as murrelets, petrels, and kittiwakes. The subspecies of peregrine falcon that breeds in the park, the Peale's peregrine, is a genetically and ecologically distinct population found along the Pacific coast from Washington to western Alaska. Peale's peregrine falcons are a subspecies of special concern in the U.S. due to very small population size (estimated at less than 1,000 individuals), restricted distribution, declining prey base, susceptibility to human disturbance at nest sites, and lack of baseline data to assess conservation status.

Little is known about the ecology of Peale's peregrine falcons in the park. In 1985, the U.S. Fish and Wildlife Service conducted

an inventory of raptors along the Kenai Fjords coast and discovered a relatively dense population of Peale's peregrines, but no additional surveys have occurred since then. This summer, researchers will be resurveying the Kenai Fjords coastline to evaluate the current distribution, abundance, and reproductive status of Peale's peregrine falcons. Two boat-based surveys will be conducted in 2010, one in May and one in July, to 1) document the location of breeding sites; 2) determine the minimum breeding population size; and 3) determine reproductive success.

Since coastal peregrine falcons are almost entirely dependent upon seabirds for food, their nesting success and productivity rates could serve as an indicator of seabird abundance and distribution along the Kenai Fjords National Park coast.

Inventory & Monitoring

The Inventory and Monitoring (I&M) Program is a result of the National Park Service's effort to "improve park management through a greater reliance on scientific knowledge". The Southwest Alaska I&M Network (SWAN) consists of Alagnak Wild River, Aniakchak National Monument and Preserve, Katmai National Park and Preserve, Kenai Fjords National Park, and Lake Clark National Park and Preserve—organized based on geographic proximity and ecological similarity. The parks within this network share funding and a

small professional staff, who implement an integrated long-term ecological monitoring program.

During the past several years, the Southwest Alaska Network conducted biological inventories of vascular plants, small mammals, freshwater fish, and landbirds. Effective management of these resources requires information on ecosystems trends acquired through long-term monitoring of selected park resources—vital signs. Vital signs can be physical, chemical, and biological



elements and processes of park ecosystems that represent the overall health or condition of the park. Staff from Kenai Fjords National Park and the Southwest Alaska Network will be working on several vital signs monitoring projects throughout 2010.

Nearshore Ecosystems

The marine coastline of the Southwest Alaska Network parks spans 1,180 miles (1,900 km) in the northern Gulf of Alaska and contains almost one-third of the marine coastline in the national park system. The brackish and salt-water habitats of the marine nearshore zone are some of the most productive habitats in the Gulf and are highly susceptible to human disturbance. In conjunction with various partners, the Southwest Alaska Network is monitoring six marine nearshore vital signs at Kenai Fjords National Park. This involves both late-winter and summer field work. Highlights from 2009 and plans for the 2010 field season are listed for each vital sign below.

Marine water chemistry—one salinity sensor is currently located in Aialik Bay; four more sensors will be deployed in 2010. Five temperature loggers, deployed along the park coastline, are collecting hourly temperature data throughout the year. Data collected from the tissues of Pacific blue mussels in 2007 showed low levels of a variety of organic, metallic and hydrocarbon contaminants. Data collection and analysis for contaminants will be repeated approximately every five years.

Kelp & eelgrass—in 2008 underwater video imagery was used to estimate density of five different eelgrass beds. The beds were revisited in 2009 utilizing the same underwater video techniques first employed in 2008. These beds will be monitored annually to look for

changes in eelgrass density and distribution.

Marine intertidal invertebrates—in 2010 we will complete our 4th year of sampling in rocky substrates. Invertebrate species composition and density, percent algae cover, and Pacific blue mussel (*Mytilus trossulus*) distribution and density are monitored.

Marine birds & mammals—late-winter boat-based systematic shoreline surveys were conducted in 2008, the first since the Exxon Valdez oil spill in 1989. Winter surveys primarily focus on over-wintering sea ducks that use the nearshore prior to migrating to their nesting grounds. The next late-winter survey is scheduled for 2010 and every other year thereafter. Summer (June) surveys were completed for a third year in 2009 and are conducted annually.

Black oystercatchers—skiff-based shoreline surveys will be conducted for a fourth year in 2010 to estimate breeding pair density and overall density of breeding and non-breeding black oystercatchers and to sample nest site prey remains that are used to provision the chicks. These surveys are conducted on an annual basis.

Sea otters—are considered a 'keystone species'. Monitoring sea otter abundance, density, distribution, survival, and diet can help managers anticipate broad ecosystem responses to sea otter population changes. Examples of these effects elsewhere in Alaska include increases in kelp cover as healthy sea otter populations eat urchins that feed on kelp. Aerial surveys showed an increase in sea otter abundance from 799 animals in 2002 to approximately 1,511 animals in 2007. Another aerial survey is scheduled for June 2010.



Dr. Thomas Dean and Anne Benolkin (NPS volunteer) sampling a mussel bed in Northwestern Lagoon.

Inventory & Monitoring

Climate

The climate of Kenai Fjords was colder and drier than average during the 2009 water year (October 1, 2008 to September 30, 2009). Fall and winter months were characterized by colder than average temperatures and precipitation was less than normal. January was the only fall or winter month to receive above normal precipitation. Spring and summer months were generally colder and drier than average. July was a month of extremes – three daily high-temperature records were set in Seward during the first half of the month; unusually wet conditions during the last half of the month made it the second-wettest July in the history of Seward.

The SWAN maintains two automated weather stations in the park. One station is located high on the Harding Icefield about seven miles southwest of the Exit Glacier Nature Center. The other is located on the coast about 60 miles southwest of Seward on a ridge immediately north of McArthur Pass. These stations use satellite telemetry for year-round transmission of near-real time weather conditions, which can be viewed online at:

http://science.nature.nps.gov/im/units/swan/index.cfm?theme=weather_stations

Observed maximum and minimum daily temperatures, average annual temperatures, observed maximum wind speeds and total precipitation during water year 2009 (October 1, 2008 to September 30, 2009).

Station Name	Max Temp (°F)	Min Temp (°F)	Avg Temp (°F)	Max Wind Speed (mph)	Precip (in)
Exit Glacier	78	-18	--	--	--
Harding Icefield	73.2	-19.3	25.4	124	--
Homer Airport	71	-8	37.0	--	14.9
McArthur Pass	77.5	1.8	36.4	122	--
Nuka Glacier	78.3	-13.7	33.9	--	61.2
Pilot Rock	78.3	10.9	41.8	66	--
Seward Airport	84	-4	37.6	--	45.5

Note: Monthly summaries (average temperature and precipitation) are not reported if more than three days of data are missing. Annual summaries are not reported if more than five days of data are missing in any month.

These weather stations are maintained every year and sensors are calibrated or replaced. In 2009, SWAN staff replaced the 20 foot masts that support the wind speed and direction sensors and also installed additional cable reinforcements. A combination of strong wind and heavy icing had broken these masts at both the Harding Icefield and McArthur Pass. Heavy-duty conduit was installed at McArthur Pass to protect sensor cables from wildlife encounters. We plan to conduct annual maintenance of the Harding Icefield and McArthur Pass weather stations during the spring and summer of 2010.



Harding Icefield weather station with new wind sensor mast and additional cable reinforcements.

For More Information

The National Park Service continues to take advantage of technological advances to better manage wide-ranging, existing information sources. Kenai Fjords National Park for example, was initially designated 'Kenai Fjords National Monument' and a master plan and environmental impact statement were prepared for the monument. Such planning documents provide a window into the management history of a park. With a network of nearly 400 sites across the National Park Service, there are thousands if not millions of such documents and related data sets.

With the advent of the Southwest Alaska Inventory & Monitoring Network, parks now have scientifically documented

species lists for vertebrates and vascular plants, as well as a suite of GIS data sources and tools.

Park Enabling Legislation

- <http://www4.law.cornell.edu/uscode/16/ch51.text.html>
- http://www.nps.gov/history/history/online_books/williss/

Historical & Management Documents (including an Administrative History completed in 2010)

- http://www.nps.gov/history/history/park_histories/

Resource-oriented data sources

- <http://science.nature.nps.gov/nrdata/>
- <http://nrinfo>

Inventory & Monitoring

- <http://science.nature.nps.gov/im/units/swan/>

Land Information

- <http://landsnet.nps.gov/>

Maps & Data of park facilities

- <http://insidemaps.nps.gov>

Park Website

- <http://www.nps.gov/kefj/>

Cultural Resources

From the Archives...



VIP Chris Ryan sets up summer residence in the Waterfield cabin at Surprise Bay.

During the 1984 season Nuka Bay Ranger Bud Rice and VIP Chris Ryan set up camp at Harry Waterfield's gold claim in Surprise Bay. Their end of season report notes that in early June, "...we set up base camp in Surprise Bay at the Surprise Bay claim site which entailed: cleaning shack, hooking up wood stove, cutting firewood, setting up wall tent, digging and constructing outhouse, building rock wash pools, installing SSB radio antenna, caching food and fuel supplies, and setting up weather recording instruments." After a busy season of patrolling and making resource impact observations and inventories, the rangers "packed gear, cleaned out shack, removed SSB radio antennas, and wrote notes for final report" on August 14th.



Old Glory and the Nuka Bay sleeping quarters, 1984. Accession #: KEFJ 1603.

Abandoned Mine Safety

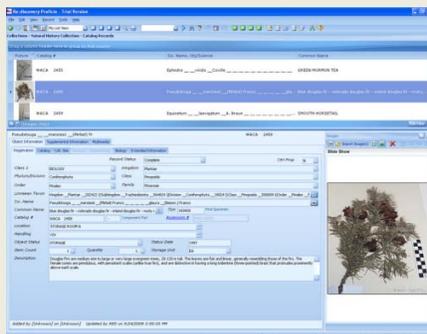
Five Nuka Bay mine adits, or horizontal entrances, are scheduled for closure in 2010. Identified as threats to public health and safety, these adits will be closed with steel gates or plugged with polyurethane foam (the closures can be reversed if needed). Four of the adits are contributing features to the Nuka Bay Historic Mining District Cultural Landscape which is eligible for the National Register of Historic Places. In consultation with the State of Alaska, the park is ensuring that these historic sites retain their integrity and are not adversely affected by the project.



Logan Hovis measures the Waterfield-Goyne mine adit in preparation for closure in 2010.

Museum Collection Planning

An updated Collection Management Plan (CMP) will be prepared for Kenai Fjords in 2010. This basic planning document provides the park with collection management guidelines. A CMP Team, composed of cultural resource professionals, will be making a site visit to the park to evaluate its museum program. Team members will consider the scope of collections, museum records, archival collections, security, environment, storage, housekeeping, access, staffing, and planning. The updated plan will assist staff with prioritizing needs and projects.



"ReDiscovery" or ANCS+ is the computer software tool the National Park Service uses in each park to help manage museum collections.

Traditional Activities

During 2010, Kenai Fjords National Park will be collecting local residents' stories about use of the Exit Glacier area during the period from 1950 to 1980. We are working with the University of Alaska Fairbanks Project Jukebox program to conduct interviews with people who hiked, camped, hunted, and skied in the area before the park was established.

A public meeting was held in the fall of 2009 and interviews will begin in spring 2010. This will result in an interactive web-based multi-media oral history including interview video/transcripts, historic photos, and maps. There will be a separate technical analysis which may be used by the park for decisions about future management in the area.



Skier at Exit Glacier in 1974. Accession #: KEFJ 12775.

Interdisciplinary

Campsite Condition Assessments

A night on the coast comes with spectacular waterfront views, peace and quiet, and fresh air. Campsites on the Kenai Fjords coast provide an amazing experience and draw hundreds of visitors each summer.

Most of the park's more than 500 miles of coastline is characterized by steep, rocky headlands, cliffs, and boulder beaches which limit opportunities for camping to only about 70 sheltered sand/gravel beaches scattered along the length of the park. About half of these sites are in the more remote southern end of the park, the outer coast and Nuka Bay, and consequently receive very little overnight use. As a result, most backcountry camping is concentrated at about 40 sites located in Aialik Bay, Northwestern Fiord, and Resurrection Bay. These same areas also contain sensitive cultural and natural resources, including salmon spawning streams, ground-nesting marine birds, coastal sedge meadows, and bald eagle nests.

Periodic surveys of selected sites reveal impacts to park resources, including fire

rings, charred wood, cut stumps, root exposure, vegetation trampling, trash, human waste, soil erosion, campsite proliferation, and social trails. Since 2007, park staff have assessed campsite impacts throughout the park, focusing on Northwestern Fiord, Aialik Bay, and Resurrection Bay. Corrective actions vary and have included removal of abandoned camping gear and repair of damaged food storage lockers. In 2010, we will continue this monitoring, working closely with Visitor & Resource Protection staff to better understand visitor behavior while at the same time documenting campsite condition.



A campsite on the beach offers spectacular waterfront views.

Social Science

In 2010 Kenai Fjords will be working with scientists from Utah State University to collect information about visitor experience along the coast. Scientists will conduct written surveys to determine the characteristics of a visitor's trip in coastal areas of the park that made it a quality experience. The National Park Service uses the Visitor Experience and Research Protection (VERP) framework to create empirical measures of management objectives by developing indicators and standards of quality. Indicators of quality are measurable, manageable variables that serve as proxies for desired conditions and define the minimum acceptable condition of indicators. Establishing indicators and standards along the park's coast will help managers protect vulnerable resources and reduce potential impacts to visitor experience.

Results from this study will also be integrated into a region-wide social science strategy for Alaska's National Parks. Kenai Fjords staff will be organizing a regional workshop in spring 2010 to develop indicators and standards for recreational visitor use that may be applicable statewide. Creating a comprehensive social science strategy for Alaska's National Parks will assist Kenai Fjords in future planning efforts and strengthen our ability to best manage and protect our natural resources.



Kayakers in the fjords are one of several types of visitors scientists hope to learn from this summer.

Climate Change

Climate change adds another dimension to the management of park resources, with a sampling of these resources highlighted in this newsletter. The dynamic and ever-changing climate is one of many reasons why Kenai Fjords was established as a National Park and is one reason our park features prominently in NPS-wide climate change response efforts. While there is no one project that addresses all aspects of climate change, there are many ways in which we are looking at the existing and potential impacts of climate change.

As this newsletter is being finalized, the NPS is finalizing a 'Climate Change Response Strategy' with focal areas of *science*, *adaptation*, *mitigation*, and *communication*. Examples of how park staff are engaged in these efforts include:

- *Science*: the Inventory & Monitoring Program and park staff analyze trends in climate, glacier mass balance, wildlife populations, and vegetation in the context of climate influence.

- *Adaptation*: visitor safety and shoreline vulnerability of the Kenai Fjords coastline have been and continue to be evaluated at sites such as Bear Glacier Lake where glacier outburst floods (jokulhaup) periodically raise water levels above normal.
- *Mitigation*: the park continues to participate in the 'Climate Friendly Parks' and other programs, reducing its carbon footprint through energy conservation measures such as purchasing electric rather than gas-powered vehicles.
- *Communication*: park staff helped search scientific literature and draft 'Talking Point' documents which summarize the state of scientific knowledge of NPS and U.S. Fish & Wildlife Service lands and waters in Alaska (these documents are currently being reviewed as this newsletter goes to press).

In addition, park superintendent Jeff Mow spent 3 months this spring working with senior NPS and Department of the Interior officials to evaluate policy implications of climate change.



The Harding Icefield is one of many resources in the park affected by climate change.

Retrospective—Early Resource Management in Kenai Fjords National Park

Even before the 1980 establishment of Kenai Fjords National Park, the NPS began collecting information on the resources and human uses of the largely unstudied coastline of the Kenai Peninsula. Information was needed to support the legislative proposals for creation of the park, primarily to be able to describe the rich marine biological and scenic resources, the environment of the Harding Icefield and the massive glaciers that radiate out from it, and the people who would be affected by creation of a new national park. The NPS formed the Alaska Task Force in the early 1970s to do this work. The Task Force was based in Anchorage, and individual members were assigned to each of the proposed new NPS units. In 1975 Don Follows, geologist and planner, and Chuck Gilbert, planning assistant, were assigned to the park proposal for Kenai Fjords. Follows and Gilbert gathered, compiled, and presented information about this proposed new area, prepared preliminary plans for park operation and public use, and represented the NPS in Seward and Anchorage on matters relating to this proposed new park.

The limited staff of the Alaska Task Force generally did not conduct original research, but gathered existing information from other sources, such as the Alaska Dept. of Fish and Game and the U.S. Geological Survey. One exception was a joint NPS and U.S. Fish & Wildlife Service survey of seabirds and marine mammals in the summer of 1976, which, for the first time counted and mapped the seabirds and marine mammals from Cape Adam on the extreme SW point of the Kenai Peninsula



Kenai Fjords National Park staff in 1983.

to Cape Resurrection on the east entrance of Resurrection Bay. The survey lead was U.S. Fish & Wildlife Service biologist Ed Bailey, with assistance from Don Follows, Chuck Gilbert, and Nina Faust (volunteer). The large colonies of seabirds and marine mammals documented by this survey led to the future designation of the federal islands along this coast as part of the Alaska Maritime National Wildlife Refuge. Briefing papers describing, and maps illustrating the resources were presented to NPS, Department of the Interior, and Congressional staff to support the proposed new NPS units in Alaska.

The first Resource Management Plan (RMP) for Kenai Fjords NP, completed in 1982, provides insight into the operations of those early park days. At the time park staff consisted of Superintendent Dave Moore and only a handful of other individuals. Because staffing was so minimal, the regional office in Anchorage was called upon to support many aspects of park planning, management, and operations. The task of formulating the first RMP fell to the Superintendent, and because there was not Resource Management staff at the park at the time, the Superintendent enlisted the help of Chuck Gilbert, who had continued to work on early planning projects throughout Alaska with the regional office. The primary component of the RMP was identification of the deficiencies in resource data, and formulation of a list of studies needed to provide the information required to adequately manage the Park. Based on their knowledge at the time, Moore and Gilbert, one evening, developed descriptions of about 10 studies that would begin to fill the voids in resource information about Kenai Fjords. The lists focused on population studies of wildlife, changes in glacier features, and weather and climate. The resource management plan for Kenai Fjords was the first approved by the regional chief scientist for any of the new NPS units in Alaska, and funding was secured to begin the identified studies.

New Faces

The saying goes something like 'one constant in life is change'. In the past year we had 2 major changes in Resource Management program staff. Shelley Hall, the Chief of Resource Management since 2004, moved to Cape Cod National Seashore in late March 2010. Among the many accomplishments during Shelley's tenure, the park completed its first 'Interim Bear Management Plan' as a cooperative effort between the Resource Management, Visitor & Resource Protection, and Interpretation teams. Shelley's lasting legacy includes a motivated staff with a strong commitment to the NPS mission. Our second change is the addition of Laura Phillips as Ecologist. Laura has a diverse background integrating wildlife and human dimensions of park management.

There are of course many faces behind the work summarized in this newsletter. We are thrilled to welcome back a staff including: Brooke, Christina, Deb, Fritz, Linda, Mark, Shannon, and several to be determined new faces.



Shelley Hall, Chief of Resource Management at Kenai Fjords National Park from 2004 - 2010; now at Cape Cod National Seashore.



Laura Phillips, joined the Kenai Fjords NP team as Ecologist in October 2009. Laura migrated south from Denali National Park where she most recently was a Wildlife Biologist.



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National Park Service
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This is the third annual issue of Resource Management News produced by the Resource Management team at Kenai Fjords National Park.

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

Kenai Fjords National Park

Kenai Fjords National Park was established on December 2, 1980 by the Alaska National Interst Lands Conservation Act (ANILCA). The park comprises approximately 670,000 acres within its legislative boundary. The National Park Service manages approximately 607,000 acres, with the remaining acreage owned and managed by the State of Alaska, Port Graham Native Corporation, and private inholders.

The park is located on the east coast of Alaska's Kenai Peninsula, thrust into the Gulf of Alaska, windward of the Kenai Mountains. Large fjords and bays cleave the coastal mountains and create a rugged coastline. A narrow slice of temperate rain forest fringes the coastline and provides a brief respite from the stark seas and expansive Harding Icefield. The icefield stretches from

tidewater glaciers at sea level to broad expanses of ice and snow, interrupted only by the nunataks of the Kenai Mountains.

The park enabling legislation identifies the following purposes: "to maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers, and coastal fjords and islands in their natural state; and to protect seals, sea lions, other marine mammals, and marine and other birds and to maintain their hauling and breeding areas in their natural state, free of human activity which is disruptive to their natural processes" (ANILCA sec.201(5)). Unlike most other park units added to or created in 1980, ANILCA did not allow for sport hunting or Federal subsistence in Kenai Fjords National Park.