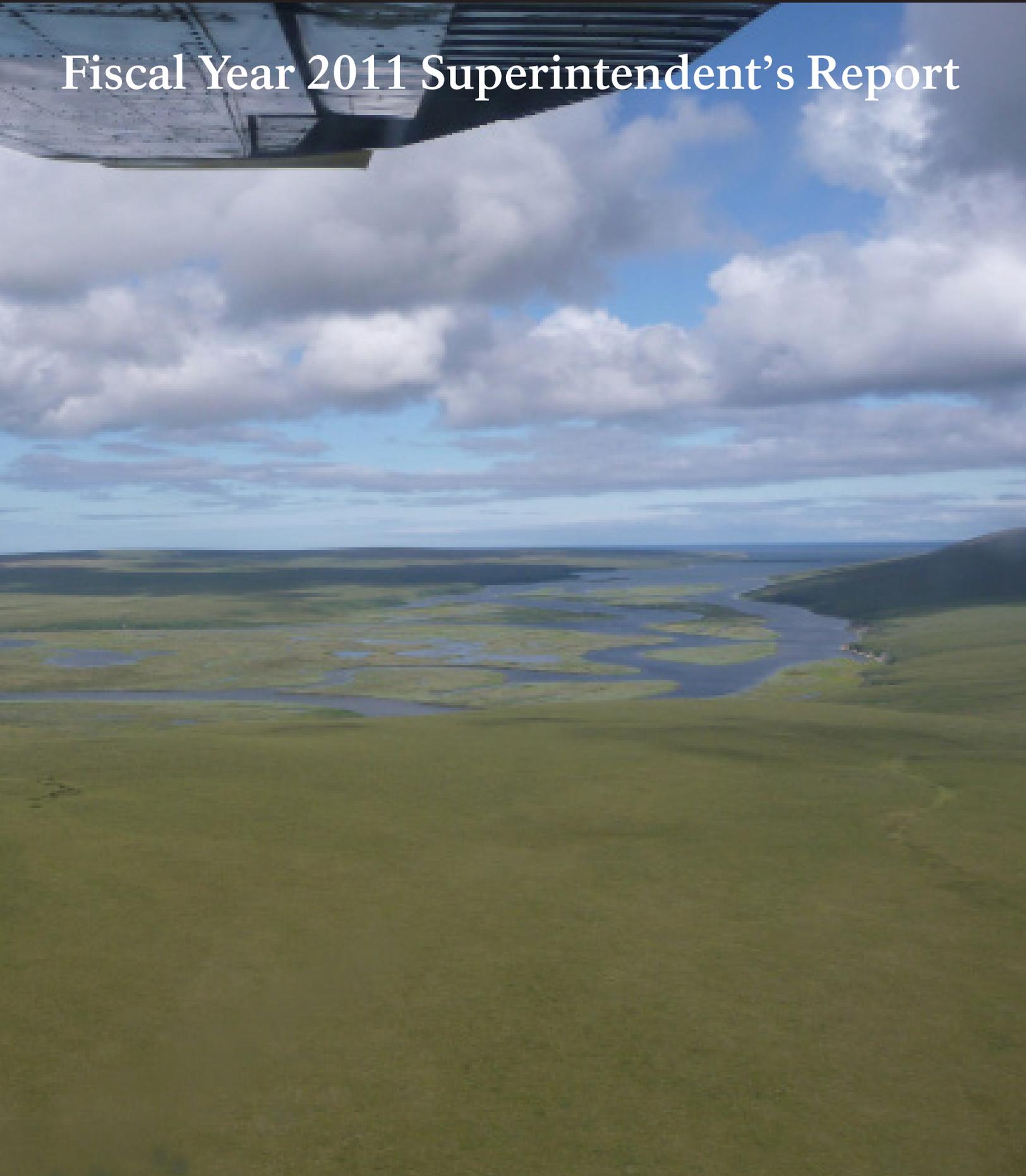
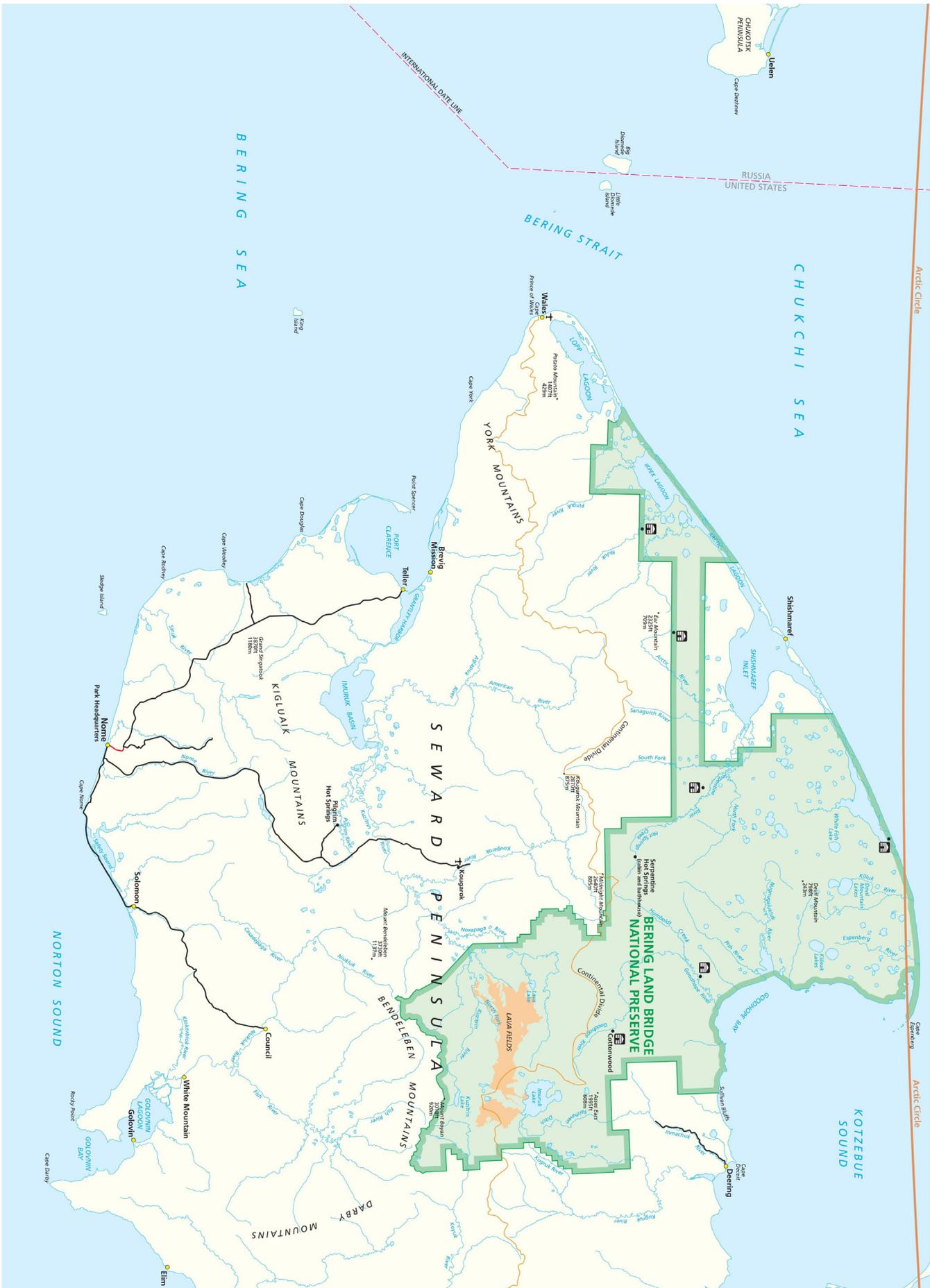




Fiscal Year 2011 Superintendent's Report





Map of Bering Land Bridge National Preserve. The park was set aside to preserve a remnant of the former land bridge. The buildings indicated on the map are shelter cabins. Not all cabins on the map are currently usable.

Superintendent's Summary

TABLE OF CONTENTS

Message from the Superintendent	pg. 3
Park Planning Summary	pg. 4
Maintenance Summary	pg. 6
Interpretation Summary	pg. 7
Cultural Resources Summary	pg. 10
Natural Resources Summary	pg. 13
Subsistence Summary	pg. 19
Beringia Days	pg.

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The purpose of Bering Land Bridge National Preserve is to protect and provide the opportunity to study and interpret the landscape which contains an invaluable record of floral, faunal, and human migration between Asia and North America and which supports an ongoing traditional subsistence culture.

Superintendent's Summary

Park Planning

Dear Friends,

This year was a very exciting year; it was the year where the Beringia Days Conference was held in Nome, Alaska. The conference being held in Nome has been a goal and aspiration by many National Park Service (NPS) staff, both at the preserve and within the Shared Beringia Heritage Program at the Alaska Regional Office. As well as program partners like Kawerak, Inc., Bering Straits Native Corporation and NANA, Inc. More information about the conference and the youth forum are located in this report.

Natural and cultural resource projects in the preserve included:

- Serpentine Hot Springs Site Management Plan and Alternative Transportation Study
- Ungulate Exclosure Environmental Assessment
- Installation of Weather Stations
- Beginning work on a Big Game Guiding Environmental Assessment

Issues faced by park management included human wildlife interactions, water quality and bathhouse issues at Serpentine Hot Springs and facility maintenance issues. During FY11, my supervisor, George Helfrich, the Superintendent of Western Arctic National Parklands took a job at Yellowstone National Park.

Assessment for review in February 2012.

Serpentine Hot Springs Alternative Transportation Study Complete

The park, with help from the Alaska Regional Office, applied for Federal Highways Administration planning funding in 2010 and received \$90,000 to plan and conduct a Serpentine Hot Springs Alternative Transportation

Study. URS Corporation from Anchorage conducted the study with park staff. The plan was completed March 31, 2011. The contractor and park staff:

- Collected baseline transportation data, current and potential visitation, and identified potential modes of accessing the hot springs (using comments from public meetings)
- Conducted public meetings in Shishmaref, Wales, Deering, Brevig, Kotzebue, Nome, and a teleconference meeting for Buckland.
- Compiled a cost analysis and discussed local and visitor experience.
- Did an impact analysis for each of the potential modes of access.

Serpentine Hot Spring Site Management Plan Underway

The Serpentine Hot Springs Site Management Plan project scoping with Nome park staff has begun. A series of public meetings will be done in Shishmaref, Wales, Deering, Nome, and Kotzebue beginning in the winter of 2012. Based on community comments from the Serpentine Hot Springs Transportation Study, a range of alternatives was created and public meetings will be scheduled to review these alternatives and take public comments. The site management plan is expected to take 3 years to complete. This project will provide needed direction for managing the Serpentine area. The plan will identify desired future conditions and develop management

Park Planning Continued

indicators and standards to protect park resources and provide opportunities for high quality use and experiences by local community residents and visitors. The plan will assess the current facilities at Serpentine and the means/methods used to access the site.

Big Game Guiding Environmental Assessment (EA)

Over the years, management at the Preserve has been asked about issuing big game guiding contracts in the Preserve. The Preserve has not had an active big game guiding contract since 1989, but over the years has held meetings in neighboring villages to discuss big game guiding. In the early to mid 1990's many villages opposed issuing big game guiding contracts but, with the increases in the muskoxen population and increased sightings of brown bear in 22E, village residents may be changing their view toward big game guiding. The Preserve is seeking funding to conduct an Environmental Assessment (EA) of big game guiding and has entered into a Project Agreement with the Alaska Regional Office to begin work on an EA. Meetings will be held in various communities in the winter of 2011.

Shared Beringian Heritage Program and International Protected Area Designation

The Shared Beringian Heritage Program recognizes and celebrates the exchange of natural resources and cultural heritage across the Bering Strait between Russian and the United States. The program seeks local resident and international participation in the preservation and understanding of natural and cultural resources and protected lands as well as working to sustain the cultural vitality of Native peoples in the region.

The goals of the Program are to:

- Foster a climate of mutual understanding and cooperation between the United States and Russia, and the indigenous people of the Beringian region in environmental protection, conservation of flora and fauna, and historic preservation and interpretation;
- Support subsistence opportunities within Beringia and recognize the unique and traditional activities of indigenous people in the region.
- Promote the study, interpretation, and enjoyment of the natural and cultural resources of international significance, including the impacts of climate change.
- Support cultural exchange between people on both sides of the Bering Strait.

The National Park Service is working on a communications plan to seek comments, and suggestions about the U.S. State Department's efforts to develop a shared protection area between Russian Parks and existing National Parks units (Bering Land Bridge National Preserve, Cape Krusenstern National Monument, Noatak National Preserve and Kobuk National Park). The NPS wants your input on what a shared protection area should be and what it will mean to the people of our region. Bering Land Bridge staff have conducted meetings in Nome, Shishmaref, Deering, Wales, Gambell and Savoonga; and Nome in 2011.

Maintenance Summary

In FY11, facility maintenance for the duplex units included installing new exterior doors, new energy efficient kitchen ranges and refrigerators (the other ones were 15 years old) and installing a metal grating on the rear decks to aid drainage during storms and ice melt. The fuel tank at the bunkhouse was leveled.

New painting at the duplexes was completed in FY10 by a contractor, but the paint failed and the contractor returned the summer of FY11 to address the paint issues.

The Park also participated in Kawerak Inc.'s E-Waste Disposal Program and removed many old computers, monitors and other e-waste that was being stored.

Basic maintenance was completed on the facilities and landing strip at Serpentine Hot Springs. Maintenance and janitorial work were done in the bunkhouse, bathhouse and airstrip. Potholes and some minor grading were done on the landing strip and the existing boardwalk was replaced. New mattress pads were purchased and the cold water ditch pipe was fixed, although there is still e.coli and fecal coliform bacteria present in the river. The NPS put up notices and educational materials about e.coli and fecal coliform bacteria. Similar to FY10, the park applied for NPS Repair/Rehab to fix the bathhouse.

Volunteers hiked and put up the winter trail tripods from hot springs to the park boundary. Volunteers also hiked and tried to put up tripods on the winter trail toward Shishmaref, they succeed in going about 9 miles, but the brush became too unwieldy to continue.

Interpretation Summary

In FY11 Bering Land Bridge National Preserve (BELA) more than doubled the attendance at formal interpretive programs over FY10. The success of BELA's interpretive programming has been in serving a non-traditional audience, local community residents. Providing programs for community youth has been very successful and has expanded this year to include a partnership with the Nome Community Day Care. This early exposure to ranger activities has also contributed to more youth and their families attending other programs or attending different levels of youth programming as they grow up. An exciting youth project completed this summer was a video project with three students in the village of Shishmaref on the northern part of the Seward Peninsula just outside the preserve boundary. These students, along with an SCA volunteer hired through Youth Program funding, worked on developing four short videos to describe what the effects of climate change have been on their lives and the lives of their families. The SCA filmed and edited the videos and the students shared their stories and provided background education to the SCA. These videos will be placed on BELA's website in the coming months.

A Teacher to Ranger to Teacher was hired this summer to work on climate change curriculum. This teacher successfully developed activities and associated curriculum in accordance with Alaska State curriculum standards. High school level curriculum was developed that addressed: food webs, increased temperatures and the associated changes to wildlife habitat, and a debate activity on how to use natural resources responsibly. These activities will be posted online for the 2011-12 school year and available for loan by the next school year. School programs in the villages on the Seward Peninsula and in Nome were conducted this fiscal year providing outreach to the same sized audience as last year. Rangers conducted curriculum based education programs at Nome Elementary School every other week

Interpretation Summary Cont.

through out the school year. The activities rangers provided were highly interactive and engaged students in critical thinking exercises and hands on experiments to discover more about park resources.

BELA was a major partner in the planning and execution of the Beringia Days Conference Youth Forum. Interpretive staff from BELA oversaw the planning and organization of the Youth Forum, organizing planning meetings and securing mentors to work with the youth on projects. Park staff assisted youth forum participants with planning projects. These projects were submitted to the Beringia Program panel for project funding and implementation for the coming fiscal year.

Junior ranger programs continue to be popular with local residents and BELA celebrated Junior Ranger Day in July with record attendance. Poor weather didn't prevent children from participating and learning about the health of Alaska's marine environments and ocean life. BELA doubled the number of rural village junior ranger programs. Youth in these communities, especially during the summer months rarely have outside visitors providing programs for them. Programs in Teller and Wales, AK focused on bear adaptations and bear safety, an important resource in the park and something the children deal with in their daily lives in their remote villages. These programs are very popular, getting nearly 50% of the children ages three to twelve who live in the villages attending. These programs rotate through different villages each year due to their remote location. However each year rangers report a noticeable increase in interest in these programs and future park stewards are being fostered.

Volunteers in Parks

VIPs were used this year to fill in during times of short staffing getting both maintenance and backcountry work done. VIPs from the village of Shishmaref helped with backcountry cabin assessments and doing some light maintenance. A VIP working with interpretation, Sarah Crane, was very useful in helping with administrative tasks like maintaining the park library, allowing the staff to work on projects and programs and saving the government time and money. Sarah also worked with rangers to assist with and conduct her own Junior Ranger program. Youth from the community of Nome were provided with a opportunity to learn more about rocks and the rock cycle, an important educational component relevant to the park's legislated significance. Another highlight of the VIP program in FY11 was the work done by a crew of students from villages around NW Alaska at Cape Espenberg. These students spent two weeks learning from and working with a group of archeologists on how to work at an archeological site and careers in the field. The students went away with a feeling of accomplishment and a new skills set to use on applications for work and college. The park maintenance staffing was short this summer and VIPs filled in out at Serpentine Hot Springs, doing routine maintenance, site clean-up and setting up fallen winter trail markers to improve safety for those traveling to the preserve in the winter. A VIP project that will reach tens of thousands of visitors in the first year
1,080.00 hours

Cultural Resources Summary

Human Response to Climate Change at Cape Espenberg

- 2011 was the last year of this project. The project conducted archaeological excavations in the vicinity of Cape Espenberg last summer (mid-June through mid-August, 2011). This was a three year project (2009 – 2011) designed to develop a detailed history of settlement at Cape Espenberg from AD 1000 to 1800 in the context of local and regional climate record.
- Last summer a crew of roughly 20 people was headed by Drs. John Hoffecker and Owen Mason from the Institute of Arctic and Alpine Research at the University of Colorado-Boulder. Three house features were excavated on three ancient beach ridges near the tip of the cape, and subsurface cores were extracted for the analysis of past climate and environment.
- The crew staged out of Shishmaref and Kotzebue. Personnel, materials, and supplies were brought in by 206 aircraft to the beach at Cape Espenberg.
- Mr. Mason is planning on attending the 2012 Kawerak Regional Conference.
- Below is an article about one of the artifacts that was found during the work.

Bronze Artifact

A prehistoric bronze artifact resembling a belt buckle was found in a 1,000 year old house pit during the “Human Response to Climate Change Project.” This was the first prehistoric casted bronze artifact ever found in Alaska. The artifact consists of a rectangular bar connected to an apparently broken circular ring. It is about two inches by one inch and is less than one inch thick. Both sections of the artifact are beveled on one side and concave on the other, leading archeologists to believe that it was manufactured in a mold. A small piece of leather found wrapped around the artifact yielded a radiocarbon date of

about A.D. 600. This does not necessarily indicate the age of the artifact because the leather could have been replaced over time.

Since bronze metallurgy is unknown from Alaska, the artifact was likely produced in East Asia and reflects long-distance trade from production centers in Korea, China, Manchuria or southern Siberia, according to Dr. Mason. It conceivably could have been traded from southern Siberia, where people began casting bronze several thousand years ago. The artifact could have come to Cape Espenberg during a migration from Siberia about 1,500 years ago.

Early Humans on the Bering Land Bridge

In July-August 2011, the Texas A&M University Center for Early Man team lead by Dr. Ted Goebel returned to Serpentine Hot Springs for a third and final field season to finish the excavation of the fluted-point occupation there. Fluted points are the diagnostic artifact of the earliest well-documented and widespread Paleoindian culture in temperate North America (Clovis). Even though these artifacts have been found in Alaska, they have always occurred in surface or near-surface settings that cannot be dated. The group’s research at Serpentine has resulted in the discovery of fluted points in direct association with dated fire-hearth features in a sealed and stratified context. Although these features have been dated to about 12,200-12,000 calendar years ago, the team returned to the site during the summer 2011.

Singyuk Burials

In August 2010, Shishmaref resident Richard Kuzuguk observed a series of exposed graves and fragments of human remains at or near surface in a stable vegetated dune area on the mainland at the northeast extent of Shishmaref Inlet, on NPS lands. Concern was expressed about the vulnerability of these remains and graves and the NPS noted that previous archeological survey of coastal areas had not included that particular locality.

Cultural Resources Summary Cont.

These burials may be related to the abandoned village of Singyuk [Singeak, Sifik] which is located roughly 1100 meters to the southwest or perhaps the as yet unlocated nineteenth century village site of Ikpizaaq which is reported to lie along the coast southwest of Ullagsaun.

Morris Kiyutelluk described Ikpizaaq to Bureau of Indian Affairs researchers as follows, in 1976: Ikipzaaq, “place where you make clear a space for games” is located on the coast southwest of “Ullagsaun”. It was a village and a fall gathering place for inter-village festivities and competitions for people from the coast from Cape Espenberg to Shishmaref. Presently covered with sand, the village and the Sinik cemetery which is about a mile west of the village have been left undisturbed. The cemetery, with some aboveground graves, includes burials from a drowning tragedy at Ikpizaaq as well as ancestors of people now living in Shishmaref.

(M Kiyutelluk in Koutsky, 1981:I:17)

Gideon Barr described Ikpizaaq to a Bureau of Indian Affairs researcher in 1988:

Today’s time, it looks as if there was no one [that] has been living there. All the old houses are covered with a sandstorm from the beach-side during the summer. . . You can’t even see anything in the line of old igloos in that area. But they are still under there... (G Barr in Fair, 1997:474)

Cultural Resources Overview and Assessment for Serpentine Hot Springs

Kim Fleming of the University of Alaska Fairbanks conducted research and synthesized data collected by herself and former project investigator (PI) Richard O. Stern to complete a document summarizing the history of human use at Serpentine Hot Springs. This overview includes archeological, historical, and ethnographic data to assist park management in making informed decisions regarding development and planning efforts.

Natural Resources Summary

Comparisons of Population Dynamics and Ecology of Muskox in and adjacent to Bering Land Bridge National Preserve and Cape Krusenstern National Monument

- Field research for this project began in 2009 and will end in 2012. This project compares and contrasts muskox populations, calf births, adult female survival, sex/age structure, health and growth information between muskoxen of the northern Seward Peninsula and Cape Thompson populations. Layne Adams of the USGS, Joel Berger of the Wildlife Conservation Society, and NPS staff biologists Marci Johnson, Brad Shults, and Jim Lawler are conducting this project.
- The studies on the northern Seward Peninsula will focus on areas east of Shishmaref including the Serpentine, Goodhope, and Cripple River drainages.
- Muskox were radio collared, fecal samples are being analyzed, and populations are being mapped.
- There are up to 30 radio-collared adult females within the preserve, ranging from Cape Espenberg to Ear Mountain.
- The project will be capturing additional animals in late March (after the harvest season closes). In early April, Joel Berger will be returning to the area by snow mobile to collect fecal samples and photographs for estimating body mass. Layne Adams would appreciate receiving jaws from harvested muskoxen, particularly with the front incisors intact.
- A final report, consisting of up to three manuscripts for publication in scientific journals, will be provided by March, 2013.

Frozen Muskox at Cape Espenberg

52 muskox carcasses were found out in the middle of a shallow lagoon at Cape Espenberg in February

2011. In late February, a substantial winter storm in the region with strong south winds pushed seawater into the Chukchi Sea and Kotzebue Sound well beyond the normal tidal range.

Natural Resources Summary Cont.

Normally, the region has a minimal tide range of about 0.3 m; an average high tide would therefore be about 0.15 m above mean sea level. During this storm surge, the water level peaked at 2.1 m above mean sea level, the highest water level recorded at a nearby gaging station since it was put in service in September 2003. As a result of the storm, seawater was forced up under the ice until the pressure was sufficient for water to come up through the ice, crack the ice, and move it around. Once the water ruptured the ice, things probably happened rather quickly and within a couple hours it would have gone from a platform of solid ice to a mixture of water, snow, and broken ice that would be very difficult to move through. It appears that the muskox were simply in the wrong place at the wrong time when the water ruptured through the ice and they were unable to make it to dry land that was above the storm surge influence. Biologists suspect they all drowned in the chaos that ensued.

Geothermal Investigations at Serpentine Hot Springs

Additional hydrological testing was conducted at Serpentine and Arctic Hot Springs in 2011 as part of the 'Geothermal Investigations' project. The overarching project goals are to characterize the hydrology, geochemistry, water quality, and microbiology of Serpentine area water resources. This year's goals were to obtain more information on discharge levels and patterns, water quality and helium isotopes (to investigate whether a hidden magma source is present). The NPS continues to collaborate with researchers from USGS and Montana State University. A final draft of overall findings is prepared and will be ready for peer review shortly. Once reviewed, results will be shared with public.

Climate Stations

In the summer of 2011 we installed nine new climate stations. Three stations were deployed in

BELA. The climate stations consist of research grade equipment that is fully automated and powered through a battery and solar panel system.

They record temperature, wind speed and direction, precipitation, snow depth, relative humidity, soil temperature, and solar radiation. For more information contact Pam_Sousanes@nps.gov

Subsistence Summary

Worked to meet the challenge of balancing the ANILCA (PL 96-487) mandated requirement to provide subsistence use opportunities of wild, renewable resources by rural residents with the NPS mission to ensure park natural resources remain unimpaired for future generations.

Reviewed, provided input into the development of, and coordinated WEAR responses to the Alaska Board of Game of Game on key wildlife regulatory issues of importance to WEAR under the dual framework of State and Federal management for the upcoming 2012 – 2013 hunt years including hunting regulations related to muskoxen.

Developed and coordinated WEAR input into the Federal subsistence wildlife regulatory cycle for 2012 and 2013 for several regulatory proposals related to the designated hunter provision and the harvest of brown bears and wolves.

Worked on the development of a special management area in the northwestern portion of the Noatak National Preserve designed to reduce user conflict during the fall caribou hunt between local subsistence users and big game commercial transporter services that provide air transport of nonlocal hunters into the Preserve.

Managed 2 federal subsistence muskox hunts in GMU 23, 4 in GMU 22, and a federal sheep hunt in GMU 23.

Visitor & Resource Protection

In fiscal year 2011, the park did not have a permanent District Law Enforcement Ranger, but we were able to have two detail rangers Greg Drum, from Voyageurs National Park and Liz Hamilton from Denali National Park. Rangers conduct a winter patrol out of Shishmaref with the assistance of a local guide, Freddy Goodhope Jr.

The primary purpose of these patrols was to assess the parks 5 shelter cabins and to work with local emergency services organizations like Shishmaref Emergency Services to ensure the safety of residents and visitors. Also to assess any visitor use conflicts that was reported at Serpentine Hot Springs.

In the fall, Mr. Drum returned to do an aviation patrol to assess ATV usage into and in the park.

Beringia Days

Visitor and Resource Protection
