ENVIRONMENTAL ASSESSMENT

FOR CONSTRUCTION OF A SPRINGTIME DOGSLED AND SKIING TRAIL FROM HEADQUARTERS TO MILE 7 OF THE PARK ROAD

Prepared by

UNITED STATES DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

DENALI NATIONAL PARK AND PRESERVE

November 22, 2002

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The National Park Service, Alaska Support Office, provided publication services.

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PURPOSE AND NEED

The National Park Service (NPS) is considering the construction of a Springtime Dogsled/Ski trail (Spring Trail) in the vicinity of the park road from park headquarters at mile 3.4 to mile 7.63 in Denali National Park and Preserve (Figure 1). The trail would be approximately 4 1/4 miles long and 8 feet wide and would be built to accommodate over-snow travel by skiers, snowshoers, and private and concessioner sled dog teams during the late winter/early spring. Trees and shrubs would be cleared from the route, but little ground disturbance would be required. Most of the trail would be built in designated wilderness. This project would be constructed during the early winter of 2002-2003.

The purpose of the trail would be to provide a late winter/early spring route through the taiga west of park headquarters. A trail for winter backcountry recreation is needed in this area because the present trail is the park road, and snow and ice removal operations have to begin early enough in the spring so that the gravel roadbed is dried out for the main season of visitor use. An area of *aufeis* (ice that accumulates on the ground in winter where groundwater emerges) that covers the road at three places beyond headquarters can take up to three weeks to be cleared, and the road is often unavailable for skiing for up to four weeks during the most popular time to pursue snow recreation. No matter how the park road snow and ice removal is managed, a quality backcountry recreation experience is not maintained during those times when the heavy equipment is working on the road.

In above average snow years the proposed trail may be usable earlier in the winter, but under normal snow conditions the snow might not be deep enough to protect the underlying soils and vegetation until January or February. In addition to creating a permanent wilderness recreational opportunity, the Spring Trail would also provide a loop opportunity in combination with the park road until the time that plowing closes the road for skiing.

Evaluation of this trail is not contained in the 1997 Entrance Area and Road Corridor Development Concept Plan/Environmental Impact Statement (DCP/EIS). Frontcountry developments that would improve visitor opportunities along the first 15 miles of the park road, however, were established as a general concept in the DCP/EIS, and this included some trails reaching into nearby designated wilderness.

This document presents the alternatives considered and evaluates the consequences of constructing a Spring Trail leading through the forest west from park headquarters. This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9).

Background

History of the Site

The first fifteen miles of the Denali Park Road was cleared for use by wagons by Superintendent Harry Karstens and an assistant ranger in 1922. The Alaska Road Commission, acting as a contractor for the National Park Service, started constructing the graded park road in 1923, finishing the 92-mile road to Kantishna in 1938. The first fifteen miles of the park road was paved in about 1967.

Because the park road has rarely been plowed during the winter, it has been used as the main dog-mushing trail heading west from park headquarters for rangers on winter patrol and recreationists since 1922. Park Headquarters is at 2,100 feet elevation and is set in a continuous taiga of white spruce with some patches of black spruce. Traveling west, the landscape doesn't open up to scrub and tundra until the elevation reaches over 2,800 feet, at approximately mile 7 on the park road. Limited attempts to cut a trail through the forest have not been successful at creating routes that inexperienced mushers or skiers could traverse safely due to side-hill locations, uneven terrain, and natural obstacles such as leaning trees (some of the inexperienced mushers would be visitors learning the art with dog teams supplied and supervised by a concessioner). Three boulder-filled tributaries of Hines Creek present hazardous crossings until they fill with overflow ice in mid-winter.

Organic Act

The NPS Organic Act and the General Authorities Act prohibit impairment of park resources and values. The NPS Management Policies uses the terms "resources and values" to mean the full spectrum and intangible attributes for which the park is established and are managed, including the Organic Act's fundamental purpose and any additional purposes as stated in the park's establishing legislation. The impairment of park resources and values may not be allowed unless directly and specifically provided by statute. The primary responsibility of the National Park Service is to ensure that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

The evaluation of whether impacts of a proposed action would lead to an impairment of park resources and values is included in this environmental assessment. Impairment is more likely when there are potential impacts to a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

Related Legislation, Policy, and Plans

On February 26, 1917, Congress established the original Mount McKinley National Park

> "…as a public park for the benefit and enjoyment of the people . . . for recreation purposes by the public and for the preservation of animals, birds, and fish and for the preservation of the natural curiosities and scenic beauties thereof . . . said park shall be, and is hereby established as a game refuge." (39 Statute 938)

In addition to specific park purposes and significance identified in the enabling legislation, the National Park Service Organic Act, which created the NPS on August 25, 1916, further specifies that the primary purpose is to manage system lands,

> "To conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

The foundation of a park trails policy was stated on page 61 of the 1986 Park General Management Plan:

> "The park intends to maintain primarily a "no formal trails" policy for the designated Denali wilderness. Generally, hiking routes in this portion of the park follow natural drainages and therefore do not require designation or maintenance."

The area within the boundary of the former Mt. McKinley National Park is closed by regulation to snowmachine use [36 CFR 13.63 (h)].

Issues/Impact Topics

Issues and impact topics are identified and form the basis for environmental analysis in this EA. A brief rationale is provided for each issue or topic that is analyzed in the environmental consequences section. Issues and topics considered but not addressed in this document also are identified.

Vegetation, Wetlands and Soils
Trail construction would remove or potentially trample vegetation and soils in the project area. Vegetation may be removed from localized wetlands. Specific concerns include:

- Trail construction and maintenance would remove white spruce and shrubs from approximately 4 acres.
- Soils in the project area could be susceptible to erosion. Creating a winter trail on undulating topography could require some level of soil manipulation.
- Summer use on a trail designed for winter use could damage the ground cover.

Wildlife Values and Habitat
Trail construction and visitor use could displace wildlife and affect habitat use.

Floodplains
Trail construction would cross the floodplains of three tributaries of Hines Creek.

Cultural Resources
Trail construction could affect unknown cultural or historic resources.

Recreation and Visitor Use
Trail construction could provide an attractive spring destination for non-motorized winter recreationists and could attract additional visitor use during the winter season.

Wilderness Resource Values
Trail construction would result in impacts to wilderness resources. Specific concerns include:

- Development of a trail could conflict with the Denali "no formal trails" policy, stated as a management goal for the designated wilderness.
- Trail construction could require the use of chainsaws and other motorized equipment that could affect wilderness solitude in the area.

Park Management
A trail would cost money to build and commit resources to maintain.

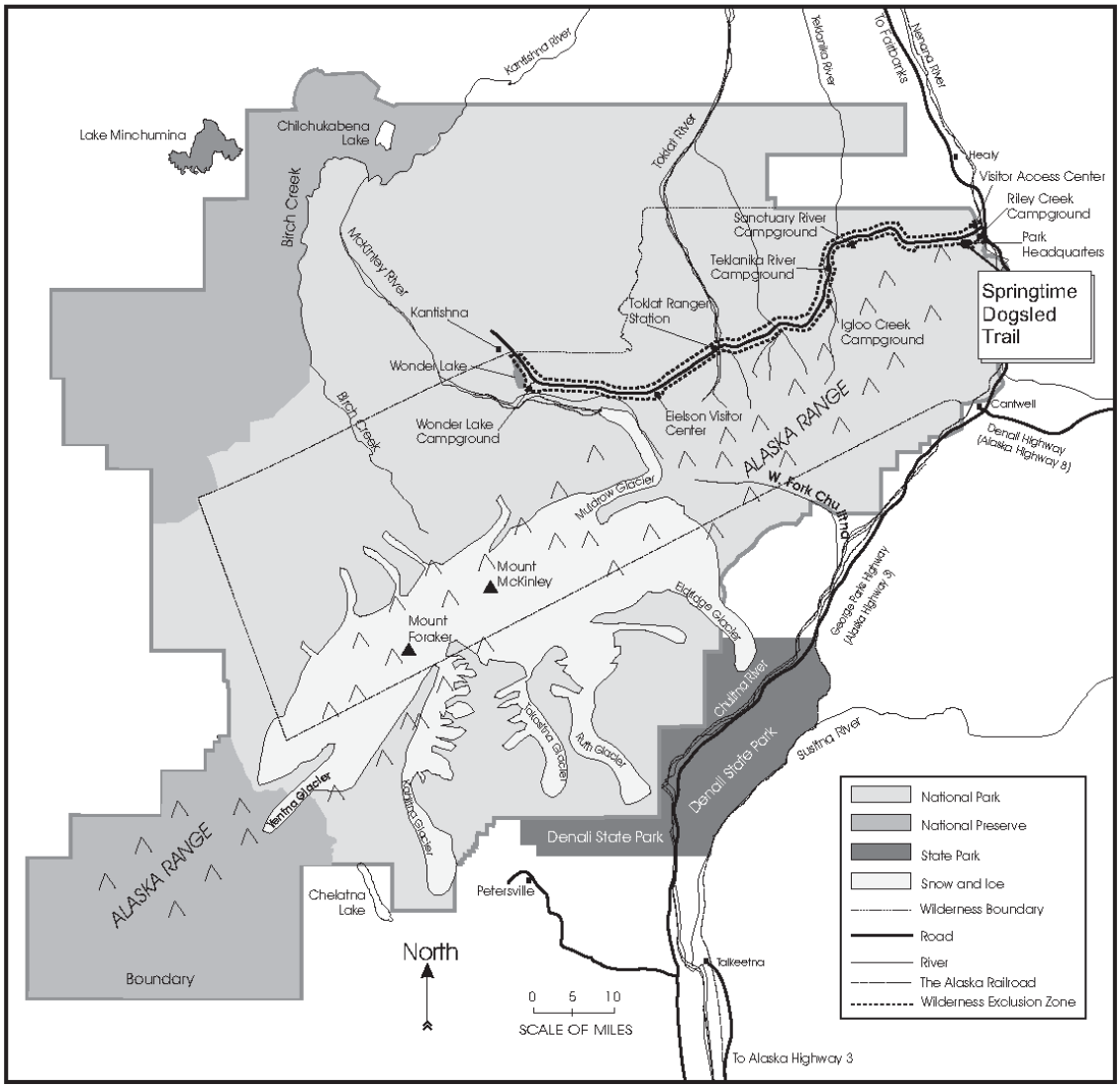
Issues Eliminated from Further Consideration

Effects on Threatened and Endangered Species
The Endangered Species Act requires an analysis of impacts on all federally listed threatened and endangered species, as well as species of special concern. In compliance with Section 7 of the Act, the U.S. Fish and Wildlife Service (USFWS) was consulted. No federally designated threatened or endangered species are known to occur within Denali National Park (pers. comm. Ted Swem, USFWS, Fairbanks, Alaska, June 9, 2000).

Air Quality
Exhaust from chainsaws may degrade the pristine air quality that currently exists within the old park. However, the frequency and duration of small engine emissions would be extremely limited.

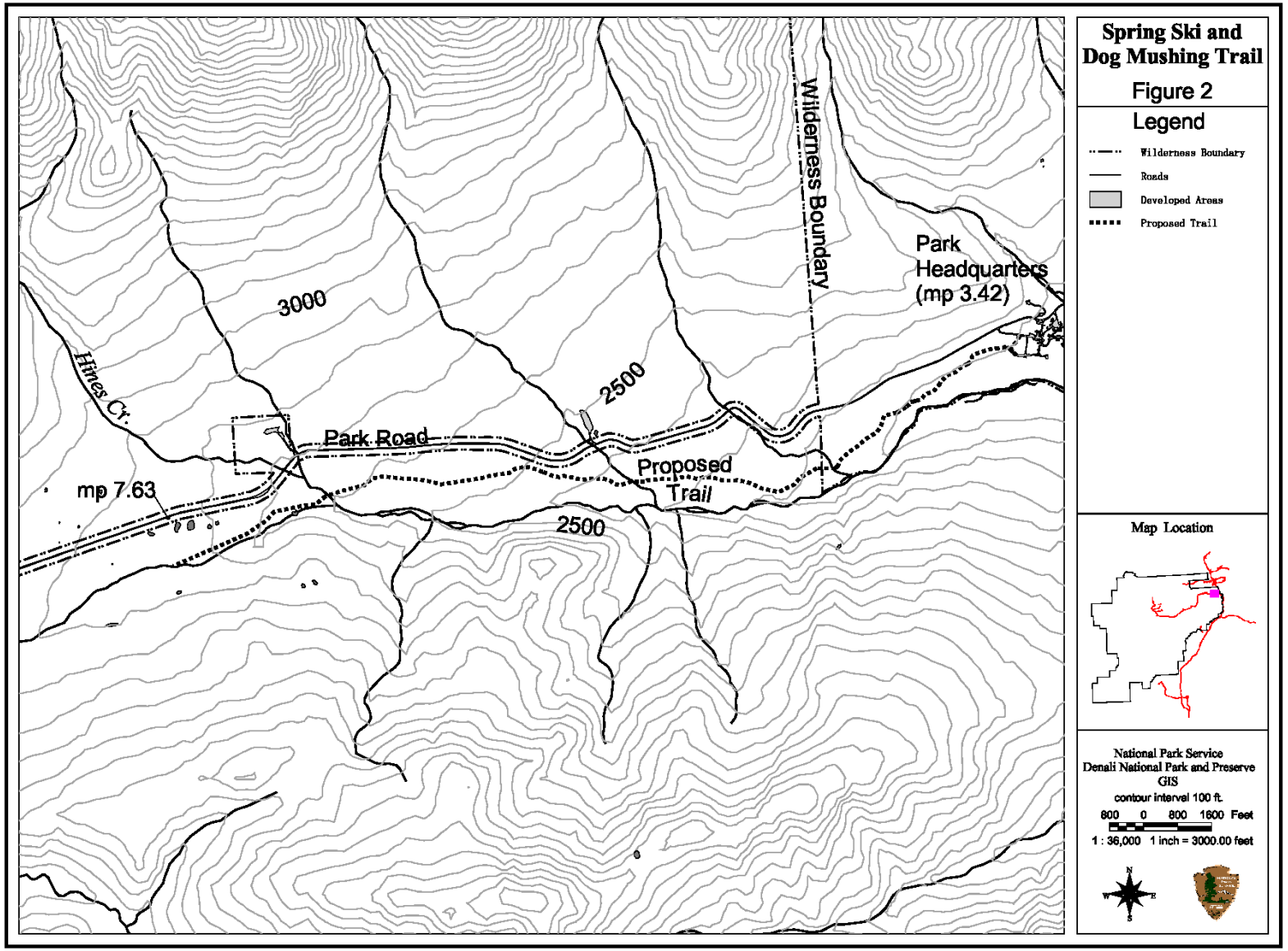
Subsistence Use
Subsistence uses are not allowed in the entrance area or on any of the lands of the former Mt. McKinley National Park, and no adverse affects to subsistence activities would occur. See Appendix A.

Environmental Justice
Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, requires all federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. This plan would not result in significant changes in the socioeconomic environment of the area, and therefore is expected to have no direct or indirect impacts to minority or low-income populations or communities.



Location in Alaska

Figure 1
PARK/REGION
Denali National Park and Preserve
U.S. Department of the Interior • National Park Service


Spring Ski and Dog Mushing Trail
Figure 2
Legend
Wilderness Boundary
Roads
Developed Areas
Proposed Trail
Wilderness Boundary
Park Headquarters (mp 3.42)
3000
2500
Hines Cr.
Park Road
Proposed Trail
mp 7.63
2500
Map Location
National Park Service
Denali National Park and Preserve
GIS
contour interval 100 ft.
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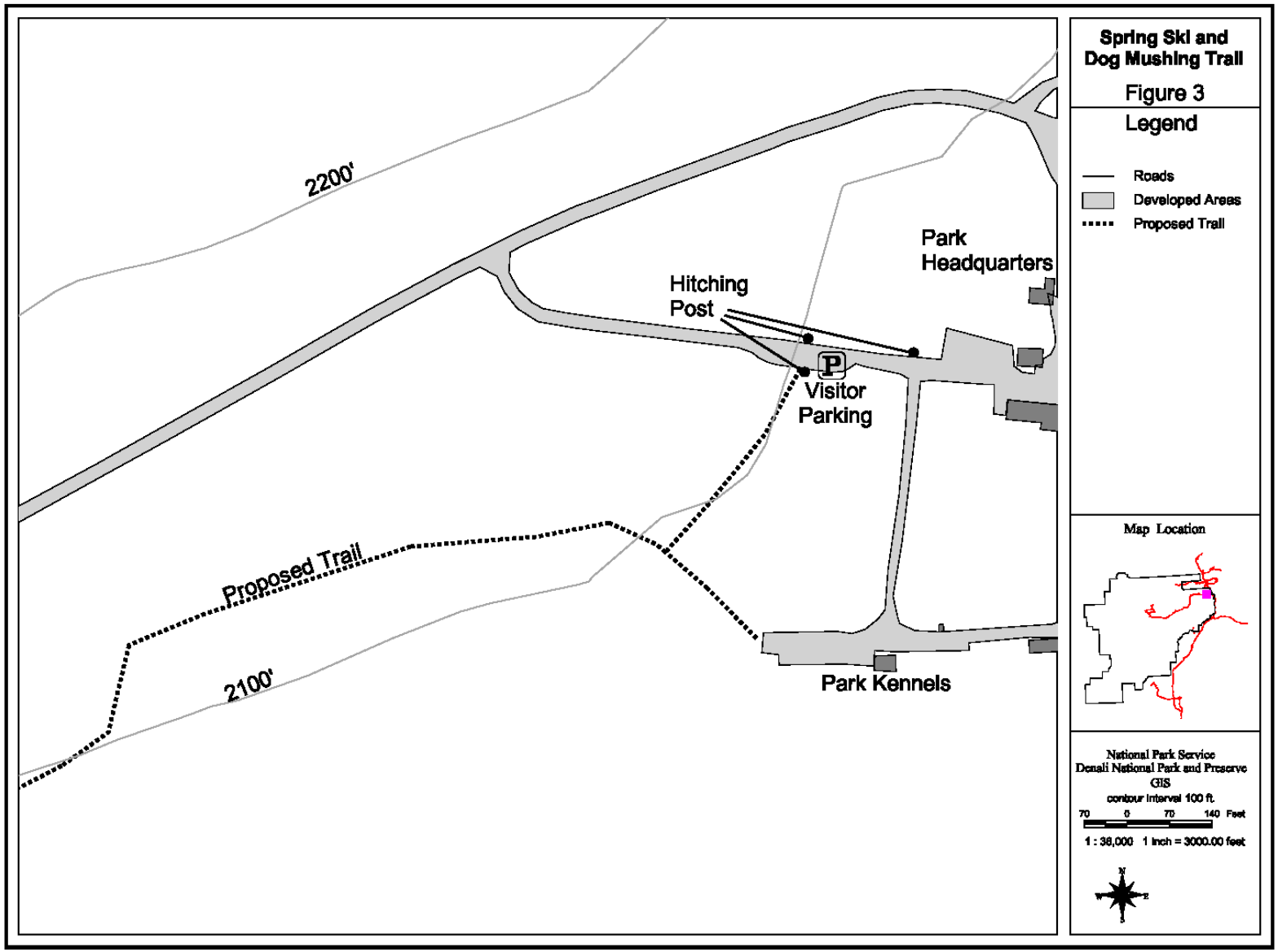
1 : 36,000 1 inch = 3000.00 feet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Hitching
Post
Park
Headquarters
P
Visitor
Parking
Proposed Trail
2100'
Park Kennels
Spring Ski and
Dog Mushing Trail
Figure 3
Legend
Roads
Developed Areas
Proposed Trail
Map Location
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DESCRIPTION OF THE ALTERNATIVES

Alternative 1: <u>No-Action (Environmentally Preferred Alternative)</u>.
Skiing and dog-mushing from headquarters west would continue to be primarily on the snow-covered surface of the park road. The wide road allows for safe passing of dog teams, maintenance of a track for conventional skiing, and room for using snow-plow skiing as a braking method when the snow surface gets too fast.

Once road-plowing operations are in full swing in March a snow route would not be available through the forest until the plowing operations pass through to the open tundra toward the Savage Campground. During an average year an *aufeis* area just beyond headquarters can take up to three weeks of heavy equipment work to open up, and the road is often unavailable for either skiing or for driving on for up to four weeks. Skiers can leave from headquarters and wind around through the forest on side hills, but these exploratory routes are unsafe for heavier use because of trees and other obstacles requiring sharp turns at high speeds on downhill sections.

Alternative 2: <u>Construct a Springtime Dogsled and Skiing Trail from Headquarters to Mile 7 (Preferred Alternative)</u>

The proposed Spring Trail would be approximately 4 ¼ miles in length, with all but one mile in designated wilderness. It would begin at Park Headquarters and end downhill of and west of mile 7 on the Park Road (Figure 2). Curves in the trail would be broad and sweeping to provide adequate sight distance and passing width for dog teams as well as cross country skiers and snowshoers. The alignment would minimize steep grades and cross slopes and would minimize problems with *aufeis*.

Trail construction work would be limited to brushing and clearing an eight-foot wide corridor, and cutting the tops off the largest tussocks to level the trail as necessary. Work would be undertaken by a park crew in the early winter of 2002-2003, as time is available and after the surface of the ground is frozen. Tussocks would be cut using grub hoes and pulaskis and the cut material would be moved to fill the low spots. Brush and trees would be cut with motorized brush cutters, chainsaws, handsaws and polesaws. The use of those mechanized/motorized tools was approved in a project-specific minimum requirement analysis. Brush would be scattered out of sight and firewood-size wood would be stacked near the trail and hauled by dog sled during the winter to Park Headquarters or to ranger patrol cabins.

Temporary wooden plank bridges would be used at the three creek crossings until there is adequate snow and ice to cover the floodplain boulders (Figure 2). The planks would be stored in the forest at the end of the season for use during the next winter. No borrow material would be needed for the construction, and no revegetation work would be part of the plan. The trail would not be signed or mapped for summer use.

Of the 4 ¼ miles of trail, approximately 3 miles would follow previous clearing work, although the full length would need to be brought to the 8 foot wide standard.

The trailhead for visitors would be at the parking area used by the Dog Demonstration buses in the summer. Dog trucks would park diagonally and the dogteams could be tied off to two posts installed 100 feet apart at the trail head for use at take-off or to tie off to when returning to the parking area. (Figure 3). The trail would not be groomed.

Crews under the supervision of the park Trails Supervisor would survey and flag the route and would operate motorized equipment on the trail. Crews and volunteers would prune trees along the corridor and would scatter brush and cut some tussock tops. Trail maintenance would be necessary for cutting willows and alders growing back so that they don't interfere with use of the trail.

Alternatives Considered and Eliminated from Further Consideration

1) Plow the Park Road All Winter to Mile 7. Plowing the road to mile 7 all winter would keep the *aufeis* from building up beyond mile 4 and would allow Spring Road Opening to start around the first of April in most years. Visiting dog mushers and skiers could park at mile 7 for their park trips. This alternative would not meet the objectives of providing a trail for the park kennel dog teams. All teams would have to be trucked to mile 7 for every training run or patrol. Also, a different facility would need to be identified for the administrative storage presently at the mile 7 pit and some type of local power would be needed for vehicle plug-ins due to cold weather starts at the parking lot that would be 4 miles beyond commercial power.

2) Springtime Trail North of the Park Road. Construction of a Spring Trail north of the park road was evaluated. Creek crossings along a northern route would be more difficult because the banks are steeper and would require ground alternation. Dog-mushing patrols out of the park kennels would also have to cross the park road, adding an unnecessary risk of vehicle conflict when the dogs are excited at the beginning of a run.

3) Construct an All-Season Trail Adjacent to the Park Road. Construction of a 4 ¼ mile long formal trail within the 300-foot wide wilderness exclusion along the park road corridor was evaluated. This trail would be fully benched into the sidehill below the park road using heavy equipment and would continue the roadside path now ending at park headquarters. It was decided that this alternative would go far beyond the need and objectives that brought forward the proposal. This alternative would be very costly and would adversely affect the feel of wilderness on both sides of the road that most visitors experience on the bus ride beyond park headquarters.

Environmentally Preferred Alternative

Alternative 1 (No Action) is identified as the Environmentally Preferred Alternative because it affects the least wildlife habitat and vegetation acreage. The No Action alternative, however, has not provided a recreational facility during the time of year when skiing and dog mushing are most popular.

AFFECTED ENVIRONMENT

The following documents contain descriptions of the environment of the park. They are incorporated by reference and summarized below:

- The 1986 *Denali General Management Plan (GMP), Land Protection Plan, and Wilderness Suitability Review*, guides the general management of the park and the protection of park natural and cultural resources. The plan contains a review of the suitability of park lands for wilderness preservation. It also describes the park's natural and cultural environments and existing visitor use.

- The 1996 *Park Entrance Area and Road Corridor Development Concept Plan /EIS* amends the park's 1986 GMP. It contains an updated description of the park's natural and cultural environments and visitor use, focusing on the park road corridor.

- The 2000 *Environmental Assessment for the Permanent Closure of the Former Mt. McKinley National Park to Snowmobile Use* contains natural resource information related mostly to winter activities.

Climate and Snowfall
Park Headquarters (elevation 2,070) averages approximately 15 inches of precipitation per year, including about 80 inches of snowfall. The snow comes equally during November through March, at about 13 inches per month.

Air and Water Quality
Denali National Park and Preserve is designated as a Federal Class 1 air quality area. Air quality in the park is generally very good, and no cases of exceeding the National Ambient Air Quality Standards have been documented. The exceptional air quality provides conditions that are outstanding for daytime panoramic views. The park and preserve is managed to achieve the highest attainable air quality levels and visibility standards consistent with mandates specified by the Alaska National Interest Lands Conservation Act (ANILCA), the NPS Organic Act, and the Clean Air Act.

The surface waters near Park Headquarters are generally pristine and have not been adversely affected by development. Some of the nearby creeks run turbid during storms or days of heavy snowmelt.

Vegetation, Soils, and WetlandsThe proposed trail would be set in an open to closed white spruce forest with localized small stringers of black spruce (*Picea mariana)*. Tall shrubs, such as feltleaf willow (*Salix alaxensis*), diamond-leaf willow (*Salix planifolia*), bebb willow (*Salix Bebbiana*), Richardson willow (*Salix lanata*), and Barclay willow (*Salix barclayi*) are common alongside the drainages or in areas of springs. Shorter shrubs such as blueberry (*Vaccinium uliginosum*), labrador tea (*Ledum groenlandicum*), rose *(Rosa acicularis*), and tundra rose (*Potentilla fruticosa*) are also common.

Palustrine scrub shrub wetlands are found bordering the drainages and below springs or seeps.

Wildlife Values and Habitat

Two primary reasons Mount McKinley National Park was established in 1917 were to protect the outstanding assemblage of wildlife resources and to allow natural processes to continue unaltered by human activities. Opportunities exist near park headquarters to view moose, red fox, and grizzly bear, as well as more elusive species such as wolves and wolverine. Red squirrel, arctic ground squirrel, red-backed vole, thrushes, and willow ptarmigan are also common, while goshawks and a variety of owls are seen.

Moose are the most common large mammal observed, with the willows growing along the tributaries and slopes of the Hines Creek drainage being favored year-round habitat.

Floodplains

The proposed trail would cross three tributaries of Hines Creek. The streams' summer discharges range from 1 to 3 cubic feet per second, and the streambeds are filled with cobbles and boulders. The streambanks range from 1 to 6 feet high. Ice usually fills the channels by mid-November and covers the boulders by mid-December.

Cultural Resources

The Denali region of Alaska has fostered a rich prehistory and history of human occupation. The exact extent of human activity is not yet fully known. Early bands of inhabitants were likely migratory, following herds such as caribou, and leaving scanty remains at their temporary camps and game lookout points. Specific sites are known from the entrance area, about 2 miles away from the project area.

Wilderness Resource Values

About 95 % of the former Mt. McKinley National Park was designated as wilderness by Section 701 of ANILCA in 1980. Wilderness is an area "without permanent improvements" and with outstanding opportunities for solitude. The wilderness area west of park headquarters provides outstanding opportunities for primitive unconfined recreation, including nature study, wilderness and wildlife photography, cross-country skiing, snowshoeing, and dog mushing. Beyond mile 4, designated wilderness starts 150 feet either side of the centerline of the park road, except at nodes excluded from designation for potential development purposes. In winter, the park road area is considered “backcountry” when not being used by motor vehicles.

Recreation and Visitor Use

Visitation from October to April is light. There were approximately 1,400 visitors recorded in 1998/1999 during these months. (NPS monthly public use reports, unpublished). This number derives generally from visitor contacts in the park headquarters area and in the backcountry. Visitation likely is undercounted because visitor counting is not occurring at this time of year as completely as it is during the summer. Use of the park for winter activities is limited by the distance to population centers, few daylight hours, and cold weather. Use by skiers, dog mushers, and other visitors increases in the spring. During the 1990's, park dog mushing patrols have contacted between 100 and 200 skiers and dog mushers annually along interior routes paralleling the Denali Park Road, the Windy Creek/Foggy Pass areas, or on the northern route through the

Stampede/Clearwater Fork corridor to Kantishna and Wonder Lake. (Park staff reports, unpublished)

Park Management.
In order to remove snow and ice from the park road so that the gravel road base west of the Savage River can dry out and reach its maximum structural strength, the NPS usually begins plowing operations in early March and opens the road to visitor traffic beyond headquarters (to the Savage River at mile 15) by early April.

A specific management question stated in the DCP/EIS is to "Determine whether visitor use in the entrance area and along the park road can be increased without compromising resource protection and the quality of the visitor experience." The increased visitor use would be accommodated by providing the necessary infrastructure and facilities to adequately serve the park visitor.

SUMMARY TABLE OF IMPACTS OF THE ALTERNATIVES

Impact Topic	Alternative 1 (No Action)	Alternative 2 (Preferred Alternative)
Vegetation, Soils and Wetlands	No impact.	Vegetation would be cut above ground from 4 acres of white spruce vegetation communities (approx. 50-80 trees) and from small patches of tall willow shrub community. These community types are common on many of the slopes within miles of park headquarters and the impact of this work would not be significant. A small number of tussocks would be removed. There would be very minimal impact to soils and wetlands.
Wildlife /Habitat	Impacts to wildlife from human interactions would continue to be uncommon and short-lived.	The impacts to large mammals from construction would be small and short-term. Moose may use the trail in the spring but would likely not defend it because there would be little willow growth adjacent to the trail. Up to 4 acres of small mammal habitat would be removed during trail use due to compaction. The small size of the zone of disturbance compared to the amount of surrounding undisturbed habitat decreases the impact's severity.
Floodplains	No impact	No measurable impact from 3 temporary board bridges.
Cultural Resources	No impact	No impact
Wilderness Resource Values	No additional impacts	Resources such as natural sounds and opportunities for solitude would be temporarily affected during construction. The wild character of the landscape would be tamed somewhat by putting in a trail. Wild landscape would be in abundance nearby. Trail construction would have a very limited effect on wilderness experiences because of very low visitation in late fall. The use of trails for dog teams to traverse the Alaskan taiga wilderness is common historically and this project would not negatively affect most visitors' wilderness experience.
Recreation and Visitor Use	The park road as a dogsled and skiing trail would either be affected by sharing the roadbed with heavy equipment or continue to be unavailable for part of the late winter/spring, the most favorable time of year for these activities.	The trail would benefit an increasing number of park users by creating a new over-the-snow trail available at the time of year when more users would want one. The new trail would also connect with the usual park road as snow route as a loop facility. The trail would neither be usable nor a visual detraction in summer.
Park Management	No impact.	A management goal of providing useable springtime facilities would be met. The trail would not be in conflict with the policy of “no formal trails” because it would not be a hiking trail.

ENVIRONMENTAL CONSEQUENCES

Construction of a Spring Trail at park headquarters would affect the following park resources: 1) vegetation, soils and wetlands, 2) wildlife values and habitat, 3) Floodplains, 4) cultural resources, 5) wilderness resources values, 6) recreation and visitor use, and 7) park management. These impacts are discussed below.

Impacts of Alternative 1-(No Action) (Environmentally Preferred Alternative)

1. Vegetation, Soils and Wetlands. No new trails would be constructed that would disturb the open and closed white spruce forest community, soils or surrounding palustrine scrub shrub wetlands.

2. **Wildlife/Habitat**. Conflicts with large mammals are uncommon with the use of the park road for winter activities, probably because of the width of the road. Wildlife patterns, small mammals and habitat would be unaffected by continuing to use the park road for winter use activities.

3. **Floodplains**. There would be no new impacts to floodplains.

4. **Cultural Resources**. Ongoing activities would not cause any impact to known cultural resources.

5. **Wilderness Resource Values**. Under this alternative there would be no additional long-term impacts to wilderness resources. There would be temporary impacts to natural sounds and landscapes from the experimental use of heavy equipment to keep up with the aufeis. This would add to the normal sounds reaching the wilderness from the use of vehicles when the road is open to public driving. This winter impact would be limited because the equipment would be off the road by 10am, before most users would arrive.

6. **Recreation and Visitor Use.** The park road would continue to be unavailable for winter recreation activities during a period in March and April due to snow and ice removal actions. This is the most favorable time of year for these activities due to warming temperatures, deeper snow and longer day lengths. Most park visitors would continue to go elsewhere at this time.

7. **Park Management**. During the period when snow and ice removal activities close the park road, no safe and practicable routes to the open tundra parts of the park would be available.

Cumulative Effects: The impacts of this alternative to natural resources such as vegetation and wildlife habitat would be minimal to non-existent and there would not be a contribution to any impacts from other local or regional projects.

Conclusion: This alternative would limit winter visitor recreational opportunities at the time when the highest number of visitors would like to pursue them. The one winter use trail in the park area available most of the winter is the park road, and in March it is made unavailable for use when it likely would be the most popular time to have it available. This alternative would not

impair park resources but it would adversely affect some opportunities for enjoyment of those park resources.

Alternative 2- Construct a Springtime Dogsled and Skiing Trail from Headquarters to Mile 7 (Preferred Alternative)

1. **Vegetation, Soils and Wetlands**. Trees and tall shrubs would be cut from 4 acres (4 ¼ miles x 8 feet wide) of open and closed white spruce forest communities. Because segments of old cuts and clearings would be used for almost 3 miles of the proposed trail, it is estimated that only 50-80 mature spruce trees would be removed for the trail. These community types are common on many of the slopes within miles of park headquarters and this limited permanent vegetation removal would not affect the functioning of these types. No rare plant species have been found in the project area.

No mineral soil would be disturbed under the alternative, although minor disturbance to the organic layer would occur when cutting the tops of some sedge tussocks and placing those in low spots.

Palustrine scrub shrub wetland types would be encountered in short stretches along the trail. The plan includes no ground disturbance to these wetlands other than removing a small number of tussocks. The impact of limited brush removal would be minimal and reversible.

A permit from the Corps of Engineers would not be needed for these activities in wetlands because no filling of jurisdictional wetlands would be involved and no alterations to the floodplains are proposed. The creation of trails in wetlands for recreational and interpretive purposes are actions excepted from NPS requirements to prepare a Wetlands Statement of Findings and to complete compensation wetland creation.

Cumulative Effects: No other projects are anticipated along this part of the road corridor. Up to 5 acres of spruce forest may be cleared or thinned in the headquarters and C-Camp areas to remove hazard fuel in anticipation of future wildland fires. Clearing mixed forest vegetation on 4.25 acres for additional visitor facilities in the depot and hotel area was approved in the DCP/EIS. The vegetation removal due to these projects is not expected to have a significant cumulative impact on the tens of thousands of acres of taiga or other vegetation resources at the park entrance area.

Conclusion: The clearing of trees and shrubs from the 4 acre path of the proposed trail would result in a limited adverse impact to vegetation and wetlands, but would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or key to the natural or cultural integrity of the park.

2. **Wildlife/Habitat**. Clearing the trail in late fall would not significantly alter or remove large mammal habitat options. The duration of this work would only be for one month or less and the habitat displacement of large mammals because of noise and construction activity would be small and short-term. The moose rut would not be affected because it would be over when vegetation clearing occured.

Use of the trail in the spring would create new opportunities for interactions between dogteams, skiers, and moose. Moose are alert to sounds and generally stand out of sight when hearing a dogteam approach, unless the trail becomes the platform from which forage is obtained. The trail would only be routed through scattered willow habitat, and no trailside berms would be created that would encourage additional growth of willow along the trail. This new route through the forest could be used by predators such as foxes to access prey more easily, but the result of adding this one route is not expected to have any measurable impact. No coyote use would be expected in the area.

Up to 4 acres of small mammal habitat would be removed during trail use by compacting the snow into an ineffective insulator. Habitat contiguous to and surrounding the trail would be available to resident and displaced wildlife. The small size of the zone of disturbance compared to the amount of surrounding undisturbed habitat decreases the severity of this impact.

No known raptor nest trees would be cut down.

Cumulative Effects: No other projects are anticipated along this part of the road corridor. Up to 5 acres of spruce forest habitat may be cleared or thinned in the headquarters and C-Camp areas to remove hazard fuel in anticipation of future wildland fires. Clearing mixed forest vegetation habitat on 4.25 acres for additional visitor facilities in the depot and hotel area was approved in the DCP/EIS. The habitat removal due to these projects is not expected to have a significant cumulative impact on the large or small mammal populations that roam freely in the tens of thousands of acres of taiga and other vegetation resources in the park entrance area.

Conclusion: The clearing of trees and shrubs from the 4 acre path of the proposed trail and the subsequent winter use of the trail would result in a limited adverse impact to wildlife and habitat, but would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or key to the natural or cultural integrity of the park.

3. **Floodplains**. The wooden plank bridges used to span the floodplains of three tributaries of Hines Creek would not block the flows nor change other hydraulic characteristics of the streams. The bridges would be removed at the end of each winter use season and would not affect the stream during breakup or high flows during summer preciptation events.

Cumulative Effects: No other projects are anticipated along this part of the road corridor, and no other projects in the entrance area are proposed that would affect floodplains.

Conclusion: The placement of temporary springtime bridges over three tributaries of Hines Creek would not result in measurable impacts to floodplains, and would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or key to the natural or cultural integrity of the park.

4. **Cultural Resources**. An archeological investigation in September, 2001 revealed no archeological resources on the trail route. No disturbance to the mineral soil is anticipated from the project and no impact to archeological resources is expected.

No other cultural resources have been found during past general surveys. No cultural resources are anticipated to be found along the trail route due to the fact that this area has been protected within a national park since a park boundary change in 1922. If cultural resources are uncovered during the clearing effort, work would cease and appropriate mitigation would be undertaken prior to resumption.

5. **Wilderness Resource Values**. Trail construction would have only a short term impact on wilderness resources and likely would not affect anyone's wilderness experience because the project would happen in late fall when the road would be closed at park headquarters, the days are short, and when there are few park visitors.

The use of motorized equipment is prohibited when other reasonable alternatives are available to protect wilderness values. Rapid completion of this project would be the best mitigation for impacts to wilderness values, as explained in the Wilderness Finding (Appendix C). The short-term increase in motor noise from chainsaws and other small engine brush cutters would have minimal, short-term impact on wilderness values.

Development of this trail in designated wilderness would slightly diminish the opportunities to experience an untouched landscape. However, all parts of the local landscape except the vegetation canopy would remain untouched. Because the proposed trail would use long stretches of areas that combine previous tree thinning with natural forest openings, it may be difficult for the average visitor walking from the park road to Hines Creek to notice the difference after trail construction.

Many trails in designated wilderness have been constructed to accommodate horse or other stock use. For the Alaskan taiga the traditional accommodation would be to cut trails for use by dog teams. These impacts to wilderness character would be lessened by not developing the trail for summer-use, when the vast majority of Denali's visitors are in the park.

Cumulative Effects: No other projects are proposed for development in the area in designated wilderness.

Conclusion: The clearing of trees and shrubs from the 4 acre path of the proposed trail would result in a limited adverse impact to wilderness resource values, but would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or key to the natural or cultural integrity of the park.

6. **Recreation and Visitor Use**. The proposed trail would beneficially affect park users by making available an over-the-snow forest trail opportunity, with the expectation that frequent use by staff and visitors would keep the trail maintained. The trail would follow the shallowest grades available between park headquarters and mile 7 and provide the type of experience many visitors seek in the spring at lower elevations. The alignment would utilize an existing parking area for visitors without creating additional congestion along the park road, and would provide an entry to the trail for the Park Kennels staff that does not require dogteams crossing the park road.

It is expected that more Alaskans would take advantage of the skiing and dog-mushing opportunities at this end of the park during the spring. With a Spring Trail available, the usual March road closure for snow and ice removal would not preclude users from having a practicable route from park headquarters into the interior of the park. During the time that the ski trail on the park road is available, it could be combined with the Spring Trail to make a loop facility.

The trail would not be noticeable from the park road in summer, nor from any other commonly visited area off the road.

Adverse impacts to visitors during construction of the trail would be minimal because visitation at this time of year is limited, with few people walking around in the forest because of the colder temperatures, shorter days and unpredictable weather.

Cumulative Effects: Additional projects to enhance recreational opportunities in the east end of the park are being proposed or are under construction. They would includes new walking trails in the Savage and Headquarters areas, a visitor center and science and learning center near the train depot, and rehabilitated campsites at the Riley Creek Campground. All of these projects are seen as beneficial to the park visitor experience and the opportunity for recreation.

Conclusion: The clearing of trees and shrubs from the 4 acre path of the proposed trail would result in a beneficial impact to recreation and the visitor experience, and would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or key to the natural or cultural integrity of the park.

7. **Park Management**. A park management goal to construct facilities as accessible as possible, within the limits of topography and other factors, would be met. The alignment chosen would allow as wide a range of users as possible to use the topography in the area.

The proposed spring trail would not conflict with the "no formal trails" policy in the park GMP because: 1) the policy is primarily aimed at hiking use; 2) the policy is primarily aimed at use in the tundra; and 3) following a drainage (in this case Hines Creek) is not feasible because it would be too steep, narrow, and icy,

Two relevant general planning concepts in the 1997 DCP/EIS are to enhance visitor opportunities along the first 15 miles of the park road and to better define trails at locations along the park road corridor. A defined trail through the white spruce forest environment west of park headquarters would provide an ideal opportunity for: 1) providing a visitor recreation opportunity through the entrance/HQ area taiga to the tundra in the interior of the park for the whole winter - including the popular springtime, and, 2) providing a loop trail during most of the winter.

No use of the trail would be proposed for the summer. Soil erosion and other adverse impacts to wetlands would occur because the unfrozen saturated soils could not support concentrated use during the summer. No roadside path extension in non-wilderness beyond park headquarters has been proposed at this time.

Much of the vegetation removal would be accomplished by volunteers, including local dogmushers and skiers, and the use of staff time for the project would be minimized.

Cumulative Effects: Park management options would be enhanced by construction of this trail. Constructing a dogsled trail to connect headquarters with the open tundra near mile 7 would allow management to time the snow and ice removal on the park road based on factors other than the desire to leave the road available as a winter trail.

Conclusion: The clearing of trees and shrubs from the 4 acre path of the proposed trail would result in a positive impact to park management due to the enhanced opportunities for non-motorized recreation in the entrance/HQ area as well as providing increased access for those uses to the interior of the park. The proposal would not conflict with park management or agency policy and guidelines.

CONSULTATION AND COORDINATION

The following persons and agencies were consulted in preparation of this environmental assessment:

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APPENDIX A

SUBSISTENCE - SECTION 810(a) OF ANILCA

SUMMARY EVALUATION AND FINDINGS

I. INTRODUCTION

This section was prepared to comply with Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). It summarizes the evaluation of potential restrictions to subsistence activities which could result from construction of a 4.25 mile long Springtime Dogsled/Ski trail starting near Park Headquarters at mile 3 of the park road in Denali National Park and Preserve.

II. THE EVALUATION PROCESS

Section 810(a) of ANILCA states:

> "In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands . . . the head of the federal agency . . . over such lands . . . shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency -
>
> (1) gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805;
>
> (2) gives notice of, and holds, a hearing in the vicinity of the area involved; and
>
> (3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions."

ANILCA created new units and additions to existing units of the National Park System in Alaska. DENA was created by ANILCA Section 202(3)(a):

"The park additions and preserve shall be managed for the following purposes, among others: To protect and interpret the entire mountain massif, and additional scenic mountain peaks and formations; and to protect habitat for, and populations of fish and wildlife, including, but not limited to, brown/grizzly bears, moose, caribou, Dall sheep, wolves, swans and other waterfowl; and to provide continued opportunities, including reasonable access, for mountain climbing, mountaineering, and other wilderness recreational activities."

Title I of ANILCA established national parks for the following purposes:

". . . to preserve unrivaled scenic and geological values associated with natural landscapes; to provide for the maintenance of sound populations of, and habitat for, wildlife species of inestimable value to the citizens of Alaska and the Nation, including those species dependent on vast relatively undeveloped areas; to preserve in their natural state extensive unaltered arctic tundra, boreal forest, and coastal rain forest ecosystems to protect the resources related to subsistence needs; to protect and preserve historic and archeological sites, rivers, and lands, and to preserve wilderness resource values and related recreational opportunities including but not limited to hiking, canoeing, fishing, and sport hunting, within large arctic and subarctic wild-lands and on free-flowing rivers; and to maintain opportunities for scientific research and undisturbed ecosystems.

". . . consistent with management of fish and wildlife in accordance with recognized scientific principles and the purposes for which each conservation system unit is established, designated, or expanded by or pursuant to this Act, to provide the opportunity for rural residents engaged in a subsistence way of life to continue to do so."

The potential for significant restriction must be evaluated for the proposed action's effect upon ". . . subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use. . . ." (Section 810(a))

III. PROPOSED ACTION ON FEDERAL LANDS

Proposed alternatives 1 and 2 are described in detail in the environmental assessment. Customary and traditional subsistence use on NPS lands will continue as authorized by federal law under either alternative. Federal regulations implement a subsistence priority for rural residents of Alaska under Title VIII of ANILCA.

The NPS has proposed to construct an 8-foot wide, 4.25 mile long skiing, dog mushing and snowshoeing trail to enable springtime visitors to have a route through the forest during the time that snow removal operations preclude use of the park road. Appproximately 50-80 white spruce and clumps of tall shrubs would be cleared for the trail. No borrow material would be used for the construction. Pieces of former trail cuts would be used for up to 3 miles of the proposed trail. The trail work would be located in the former Mount McKinley National Park wherein subsistence activities are not allowed.

IV. AFFECTED ENVIRONMENT

Subsistence uses within DENA are permitted in accordance with Titles II and VIII of ANILCA. Section 202(3)(a) of ANILCA authorizes subsistence uses, where traditional, in the northwestern and southwestern preserves of Denali National Preserve. Lands within former Mount McKinley National Park are closed to subsistence uses.

A regional population of about 300 eligible local rural residents qualifies for subsistence use of park resources. Resident zone communities for DENA are Cantwell, Minchumina, Nikolai, and Telida. By virtue of their residence, local rural residents of these communities are eligible to pursue subsistence activities in the new park additions. Local rural residents who do not live in the designated resident zone communities, but who have customarily and traditionally engaged in subsistence activities within the park additions, may continue to do so pursuant to a subsistence permit issued by the park superintendent in accordance with state law and regulations.

The NPS realizes that DENA may be especially important to certain communities and households in the area for subsistence purposes. The resident zone communities of Minchumina (population 22) and Telida (population 11) use park and preserve lands for trapping and occasional moose hunting along area rivers. Nicolai (population 122) is a growing community and has used park resources in the past. Cantwell (population 147) is the largest resident zone community for DENA, and local residents hunt moose and caribou, trap, and harvest firewood and other subsistence resources in the new park area.

The main subsistence species, by edible weight, are moose, caribou, fur-bearers and fish. Varieties of subsistence fish include coho, king, pink and sockeye salmon. Burbot, dolly varden, grayling, lake trout, northern pike, rainbow trout and whitefish are also used by local people. Beaver, coyote, land otter, weasel, lynx, marten, mink, muskrat, red fox, wolf and wolverine are important fur-bearer resources. Rock and willow ptarmigan, grouse, ducks and geese complete the park/preserve subsistence small game list.

The NPS recognizes that patterns of subsistence use vary from time to time and from place to place depending on the availability of wildlife and other renewable natural resources. A subsistence harvest in any given year many vary considerably from previous years because of such factors as weather, migration patterns and natural population cycles. However, the pattern is assumed to be generally applicable to harvests in recent years with variations of reasonable magnitude.

V. SUBSISTENCE USES AND NEEDS EVALUATION

To determine the potential impact on existing subsistence activities, three evaluation criteria were analyzed relative to existing subsistence resources that could be impacted.

The evaluation criteria are:

- the potential to reduce important subsistence fish and wildlife populations by (a) reductions in numbers; (b) redistribution of subsistence resources; or (c) habitat losses;

- what affect the action might have on subsistence fisherman or hunter access;

- the potential for the action to increase fisherman or hunter competition for subsistence resources.

1) The potential to reduce populations:

Habitat may be affected by trail construction and by trail use activities. These activities could have temporary and/or long-term impacts on wildlife habitat, depending on the nature and extent of the disturbance.

The proposed actions will not adversely affect the distribution or migration patterns of subsistence resources. Therefore, no change in the availability of subsistence resources is anticipated as a result of the implementation of this proposed action.

2) Restriction of Access:

All rights of access for subsistence harvests on NPS lands are granted by section 811 of ANILCA. The park and preserve are managed according to legislative mandates, NPS management policies and the DENA General Management Plan. No actions under the proposals (alternatives 1 and 2), which are described in detail in the environmental assessment, should affect in any way the access of subsistence users to natural resources in the park and preserve.

3) Increase in Competition:

The proposed action should not produce any increase in competition for resources to subsistence users.

If and when it is necessary to restrict taking, subsistence uses are the priority consumptive uses on public lands of Alaska and will be given preference on such lands over other consumptive uses (ANILCA, section 802(2)).

Continued implementation of provisions of ANILCA should mitigate any increased competition, however significant, from resource users other than subsistence users. Therefore, the proposed action would not adversely affect resource competition.

VI. AVAILABILITY OF OTHER LANDS

Other lands are available to the NPS for these purposes, but it is believed that the impacts to park resources would not be decreased by choosing a different trail route. The trail would need to be parallel to the park road to serve as an alternate route during the time when the road is not available due to snow and ice removal operations.

VII. ALTERNATIVES CONSIDERED

The alternatives considered during this project were limited to lands inside the boundaries of Denali National Park and Preserve, in particular, inside the boundaries of the former Mount McKinley National Park which is not available for subsistence use. Use of lands outside the boundaries of the former Mt. McKinley National Park would more likely affect subsistence users. Subsistence users utilize other lands outside the park and preserve, especially those lands that are most easily accessible and can provide for their needs. Subsistence users extend their activities to other areas on an as needed basis.

VIII. FINDINGS

This analysis concludes that the proposed action would not result in a significant restriction of subsistence uses.