Consolidated General Management Plan

for Denali National Park and Preserve

Introduction

This document is a consolidated General Management Plan (GMP) for Denali National Park and Preserve. A General Management Plan was completed for the park in 1986, and was then amended three times by the following:

- *Entrance Area and Road Corridor Development Concept Plan,* 1997
- *South Side Denali Development Concept Plan,* 1997
- *Backcountry Management Plan*, 2006

The extensive amendments have replaced large sections of the 1986 GMP, and essentially created a new plan that is captured in its entirety in this document. Each of the amendments included a complete Environmental Impact Statement and utilized the public involvement process prescribed by the National Environmental Policy Act, including extensive public scoping and public hearings and public comment on a draft plan. In the case of the *Backcountry Management Plan*, there was public review of two drafts.

Every effort has been made to replicate the text of the approved plans without substantive alteration. Since the original plan and its amendments were written at different times and in different styles, the text sometimes appears awkward where they have been melded together, and parallel structure could not be achieved in some sections. Small, non-substantive alterations were made only to avoid the introduction of inaccuracies through reordering text, or to enhance readability when this could be done without risk of changing the meaning of the text. Cross-references to maps, tables, appendices and document sections were redirected appropriately for new section headings and table/map numbering systems. Lists of "current" projects in the 1986 *General Management Plan* were omitted. Finally, small amounts of text from the 1986 and 1997 documents were deleted to remove outright contradictions with later amendments where otherwise both would appear in the main text.

The objective of this consolidated document is to provide all of the GMP guidance in one location so that the current planning guidance for Denali is clear. The statements of purpose and need, affected environment, and environmental analysis that accompanied each amendment are not included. To understand the context in which each of the amendments was created, readers should consult those individual plans.

As described in the 2006 NPS Management Policies, the foundation statement is the first level of NPS planning. This statement identifies the park purpose, fundamental resources and values, and primary interpretive themes as derived from the park's enabling legislation. The essential pieces of the foundation statement are articulated in this general management plan. The general management plan is the broad umbrella document that sets the long-term goals for the park based on the foundation statement. Program management plans such as a Resource Stewardship Strategy and a Resource Education Plan provide a bridge between the broad direction provided in the general management plan and specific actions taken to achieve goals. Strategic plans are 1-5 year plans that describe the specific, measurable outcomes and timelines necessary to implement the general management plan guidance. Implementation plans focus on the details of activities or projects necessary to carry out the general

actions and strategies identified by the other documents. While this document consolidates only the general management plan guidance for Denali, program- and implementation-level planning documents have made adjustments to the approved GMP actions. Where the GMP-level guidance has been amended by these other plans, the change is indicated and described in a footnote.

Colored bars on the edges of the pages code the text so that the reader may quickly determine its source. The color codes are as follows:

Black—1986 General Management Plan

Blue—1997 Entrance Area and Road Corridor Development Concept Plan

Green—1997 South Side Denali Development Concept Plan

Dark Red—2006 Backcountry Management Plan

Bright Red—Any text not from one of these sources, excepting some new or altered transition text and cross-references which are color-coded with the surrounding text.

Park Purposes and Significance

Park Purposes

The purposes of Denali National Park and Preserve have evolved from the time Congress established the original Mount McKinley National Park to the present and have increased in complexity because of the different mandates that apply to the Old Park (the original Mount McKinley National Park), the national park additions (added by ANILCA), the national preserve (also added by ANILCA), and the designated wilderness (covering most of the Old Park).

Mount McKinley National Park (Old Park)
In 1917 Congress established Mount McKinley National Park as a "game refuge" to "set apart 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 ..." (39 Stat. 938).

Denali National Park and Preserve
In 1980 Congress passed the Alaska National Interest Lands Conservation Act (ANILCA, 16 USC §§ 3101-3233, Pub. L. 96-487), which enlarged and renamed the park Denali National Park and Preserve. Section 101 of ANILCA describes the broad purposes of the new conservation system units throughout Alaska, including enlarged national parks and preserves such as Denali. These are the following:

- Preserve lands and waters for the benefit, use, education, and inspiration of present and future generations.
- Preserve unrivaled scenic and geological values associated with natural landscapes.
- Maintain sound populations of, and habitat for, wildlife species.
- Preserve extensive, unaltered ecosystems in their natural state.
- Protect resources related to subsistence needs.
- Protect historic and archeological sites.
- Preserve wilderness resource values and related recreational opportunities such as hiking, canoeing, fishing, and sport hunting.
- Maintain opportunities for scientific research in undisturbed ecosystems.
- Provide the opportunity for rural residents engaged in a subsistence way of life to continue to do so.

Section 202 stated that the Denali National Park and Preserve additions are to be managed for the following additional specific purposes:

- To protect and interpret the entire mountain massif and the additional scenic mountain peaks and formations.
- 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.
- To provide continued opportunities, including reasonable access, for mountain climbing, mountaineering, and other wilderness recreational activities.

Denali Wilderness
Section 701 of ANILCA designated the "Denali Wilderness of approximately one million nine hundred thousand acres" under the Wilderness Act as depicted on a map referenced in Section 202 of ANILCA and including 99% of the former Mt. McKinley National Park. According to the Wilderness Act, these lands are to be "administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness."

Denali National Preserve
Section 1313 of ANILCA addresses the purpose of national preserves created by the act.

A National Preserve in Alaska shall be administered and managed as a unit of the National Park System in the same manner as a national park except as otherwise provided in this Act and except that the taking of fish and wildlife for sport purposes and subsistence uses, and trapping shall be allowed in a national preserve under applicable State and Federal law and regulation.

Park Significance

Large Protected Area. Denali National Park and Preserve encompasses a vast six million acre area, about the size of the state of New Hampshire. Most of the two million acres of the original park has been in protected status since 1917. This large size enables a spectacular array of flora and fauna to live together in a healthy natural ecosystem and provides excellent opportunities to study subarctic ecosystems in settings largely undisturbed by humans. Because of these values, the United Nations Man and the Biosphere Program designated the park and preserve to be an International Biosphere Reserve.

Mountains and Glaciers. The park contains a major portion of the Alaska Range, one of the great mountain uplifts in North America. The Alaska Range is dominated by North America's highest peak, Mount McKinley, with its summit at 20,320 feet above sea level. Towering 18,000 feet above the adjacent lowlands, the mountain's dramatic vertical relief rivals any other mountain in the world, exceeding the vertical relief of Mount Everest measured from base to summit. A number of large glaciers originate in the park's high mountains, including some of the largest in North America.

Wildlife and Habitat. The park was originally established in 1917 as a refuge for large mammals. Backcountry visitors and visitors traveling along the park road often observe Dall sheep, caribou, wolf, grizzly bear, moose, and fox. While populations fluctuate, nowhere else in America can such concentrations of these large species of wildlife be observed in as accessible a natural setting. The park is also significant for its diverse avian habitat that attracts birds from all over the world. The park's rich and varied vegetation includes alpine tundra, shrub-scrub tundra, mixed spruce-birch and spruce-tamarack woodlands, taiga, wetlands, and extensive riparian and lowland forest areas. Denali has more than 10,000 mapped lakes. More than 753 species of flowering plants inhabit the slopes and valleys of the park.

Scenic Resources and Air Quality. Outstanding views of natural features, including mountains, glaciers, faults, and rivers dominate the park landscape. On a clear day, Mount McKinley can be seen from Anchorage, more than 130 air miles to the south. The exceptional air quality in Alaska and the lack of city lights near the park provide the conditions for outstanding daytime views year-round and excellent night sky visibility in fall, winter, and spring. Denali National Park and Preserve is a designated Class I airshed under the Clean Air Act Amendments.

Cultural Resources. There are 257 known cultural resource sites within Denali's boundaries, including both prehistoric and historic sites. Because cultural resource inventories have been limited to date, this number likely represents a small fraction of the park's total sites. Known resources include archeological and historic sites associated with Athabascan Indian groups, early explorers, mining history, and the early days of the park. Major prehistoric sites in the park include the Teklanika Archeological District, a property listed on the National Register of Historic Places. Many historic structures are in the park headquarters area, which is listed on the National Register of Historic Places as a district, and on the boundaries of the Denali Wilderness (along the original park boundary). These are mainly patrol cabins and other structures dating back to early years of park management. Historic mining activity dates back to the early 1900s in the Kantishna Hills (which includes the national register-eligible Kantishna Historic District), the Stampede area, and the Dunkle Hills near Cantwell.

Mountaineering. Because it is the highest peak in North America, has a high northern latitude location, and is relatively accessible, Mount McKinley is considered one of the world's premier mountaineering destinations, drawing climbers from many countries. It is touted as one of the "seven summits of the world." Many other peaks in the park, including Mount Foraker, also offer outstanding expeditionary climbing opportunities.

Wilderness Recreation. Denali offers superlative opportunities for primitive wilderness recreation. Outstanding cross country hiking, backcountry camping, and winter touring possibilities are available for those willing to approach the area in its natural condition. This huge park contains large areas with almost no trails and where evidence of human use is minimal to nonexistent. These conditions are in contrast to most wilderness areas in the contiguous 48 states where maintained trails, designated campsites, footbridges, and signs are standard. These conditions also contrast with much of Alaska, where similar opportunities abound, but are very difficult to reach. A large portion of Denali's backcountry is readily accessible to visitors who can reach the park by either highway or railroad from either Anchorage or Fairbanks – Alaska's two largest cities and major connection points for out-of-state visitors.

Planning History

Denali Entrance Area and Road Corridor

During the past 30 years, Denali National Park and Preserve has had a complex, controversial planning history. In three decades it has gone from a lightly visited, "old-line" railroad park to a prime international visitor destination. Denali's planning history includes master plans in 1965 and 1973, a general management plan in 1986, and several development concept plans or amendments to those plans. Each plan tried to offer an orderly vision of how the park would meet needs in a society that held rapidly changing and often contradictory expectations of what national parks should offer.

Since 1965 the park has tripled in size and seen the arrival of highway access, neighboring Native corporation landowners, selection by the state of Statehood Act entitlement lands, development of Alaska as an international visitor destination, and more than doubling of the state's population. The following is a chronological list of completed planning efforts and studies concerning the frontcountry of the park.

Environmental Assessment on the Park Road Rehabilitation Program (1982). This document evaluated a plan to rehabilitate deteriorated sections of the park road within five years, upgrade maintenance levels along the whole road, and identify gravel pits to support those operations. Some authorized borrow sources of gravel were found to have poor quality material, and maintenance activities exhausted the better authorized sources partially by working on projects unanticipated in the environmental assessment.

Development Concept Plan/Environmental Assessment for the Park Road Corridor (1983). This plan presented alternatives for upgrades of visitor and management facilities in the entrance area and along the park road corridor. In addition to the increasing visitation resulting from completion of the George Parks Highway and the attention Denali was getting from the package tour industry, a new 20-year concessions contract was signed in 1981. The contract promised a new bus maintenance facility, a new concession's employee dining facility, a 270-seat auditorium, and other concessions operation changes. The passage of ANILCA 18 months earlier had also allowed funding for a number of long-awaited improvements to become available. A long list of proposed projects was approved, including a decision to build a visitor orientation center at the present visitor access center site. A decision was made to renovate the existing park hotel, a collection of railroad cars and modular units assembled on site after the September 1972 fire that destroyed most of the original building.

General Management Plan/Land Protection Plan/Wilderness Suitability Review (1986). This plan provides comprehensive guidance for all aspects of park management. It creates park zones, identifies resource management needs, summarizes interpretive objectives and the desired visitor experience, identifies incompatible uses on inholdings, and determines the need and general locations for park development. Major concepts in the plan confirm the use of a limited access transportation system for the park road, set a goal to reduce private vehicular traffic, establish a maximum limit on vehicles, enact a "no formal trails" policy for the wilderness units, and create an objective to allow as many people as possible to view wildlife in the park.

The plan generally adopted the development proposals of the preferred alternative in the 1983 development concept plan, although it did remove some roadside trails and campground expansion from the previous plan. The general management plan remained consistent with the previous plan in not advocating any overnight accommodations in the Wonder Lake area other than the campground. A proposal was accepted to prevent additional lodging in Kantishna, and evaluation of alternatives for the park hotel was reserved for a public process in 1987.

Addendum to the 1983 Development Concept Plan/Environmental Assessment for the Park Road Corridor (1987). This addendum proposed a new park hotel near the existing site within an "activity center" concept. Many structures and functions, such as visitor center, general store, post office, activity expediters, and sled dog demonstrations were to be given space surrounding the hotel. All tour and shuttle bus operations would be consolidated in the existing tour bus barn area behind the hotel.

Environmental Assessment for the Visitor Access Center Use of Unconsolidated Materials Plan (1987). One of the pieces of the entrance area puzzle left unevaluated was the source of the 40,000 cubic yards of borrow (gravel) material estimated to be necessary to build the visitor center and associated parking lot. This environmental assessment was published to explore this question. A decision was made to procure gravel from outside the park. That resulted in a gravel pit and crusher operation being established within the Village View community. Future gravel acquisition required increased community participation.

Environmental Assessment for the Repair of the Denali Park Road and Associated Visitor Use Areas from Park Entrance to Savage River Bridge (1988). This environmental assessment evaluated repairing subgrade problems and repaving the first 15 miles of the park road (first paved in 1968), constructing an entrance feature and pullout, creating a parking area for bus parking near the kennels, and paving such areas as the new visitor center parking lot, park headquarters parking area, and the auto shop access road.

Cumulative Impacts of Mining Environmental Impact Statement (1990). In this EIS, the National Park Service decided to purchase from willing sellers all patented and valid unpatented mining claims in the Kantishna area. It also provided for interim management of mining operations and reclamation of lands disturbed by mining activity.

Newsletters #1-4 (1990). These newsletters announced location changes for facilities proposed in the 1983 development concept plan and 1987 addendum. The shuttle bus operations and maintenance were proposed for relocation to the sewage treatment lagoons area. The post office, general store and other camper conveniences were to be located near a new hostel close to a new loop in the Riley Creek campground. Shuttle drivers were to be provided housing at C-Camp. Other campground changes were also proposed but not adopted.

Provisions of the general management plan instituted through this process included removing private vehicle access to Sanctuary Campground and from Teklanika Campground, except for minimum three-night stays. The Savage River check station was to move from the Savage Campground to the Savage River. The newsletter process also originated the idea of a lottery to select the private vehicles allowed past Savage River during the September park road opening. The concessioner was authorized to begin a new tour, the Denali Natural History Tour, to mile 17.5 on the park road.

Amendment to the 1983 Development Concept Plan/Environmental Assessment for the Park Road Corridor and 1987 Addendum for Riley Creek (1992). A fiscal year 1992 congressional appropriation of $7 million for site work and utilities in the hotel area led to this amendment that changed the layout of facilities in the entrance area. A visitor center would still be attached to the hotel auditorium, but an administrative wing to house park headquarters would also be attached to the auditorium. A new concession's employee dining facility was to be built, but no site was finalized for shuttle bus driver housing.

Quick Reaction Audit Report on the Proposed Replacement of the Denali National Park Hotel (1992). Reacting to citizen complaints about the high cost of the proposed new park hotel, the Inspector General office of the Department of the Interior issued this audit in September 1992. The audit found that the proposed $39 million hotel was not needed because sufficient accommodations were available immediately outside the park boundary and that the hotel was not justified because the construction cost per square foot would be 325% higher than the standard for hotels outside the park entrance. This report halted spending on site work, utility upgrades, and changes for visitor facilities in the entrance area.

Borrow Source Inventory (1988) and Environmental Assessment for a Gravel Acquisition Plan (1992). Maintenance of the gravel section of the park road was limited after 1985 due to closure of most of the gravel sources within the park. Potential borrow areas were investigated in 1988 and the criteria for selecting sources were set in 1992. The proposal identified two borrow sources along the Denali park road corridor and keyed development to long-term road maintenance needs. Approximately 7,500 cubic yards of gravel per year would be available for removal from the Toklat River floodplain near the Toklat road camp. One hundred thousand cubic yards of material would be available from an expanded Teklanika pit with a 30-year life expectancy. The plan did not include provisions for individual road repair projects and rehabilitation.

Road System Evaluation (1994). To help conduct a prioritized road repair and maintenance program, a study was begun in 1986 by the Federal Highway Administration and was completed by the National Park Service in 1994. This study evaluated the condition of the park road, summarized statements on road character, and proposed treatment alternatives ranging from status quo to creating a road of uniform width and improved condition. Decisions regarding changes to road maintenance and rehabilitation were left to the 1997 *Entrance Area and Road Corridor DCP.*

Environmental Assessment on the Proposed Construction of Visitor Transportation System Facilities (1994). A decision was made to contract the operation of the shuttle bus system to the concessioner and allow them to set a fee schedule so the system would pay for itself. Pursuant to a June 1994 amendment to the 1981 concession contract, an environmental assessment was prepared to evaluate the siting of facilities needed to house the shuttle maintenance and operations in the park. The proposal included a 4-acre parking lot, doubling the size of the bus maintenance facility, a 24-room employee dormitory, a new employee dining facility, a new leachfield for shoulder season operations, moving the recreation courts, and expanding the road network. By terms of the contract amendment, this work was to be completed by September 1996.

Environmental Assessment on the Proposed Reconfiguration of the Historic Sled Dog Kennels (1995). This document evaluated modifications to the dog kennels including the clus-

tering of dogs on one side of the kennels building, improved visitor circulation, and an inclined viewing area east of the kennels building.

Entrance Area and Road Corridor Development Concept Plan (1997). This general management plan amendment addressed park road management, visitor services and facilities, and administrative facilities in the park entrance area and along the road corridor to Kantishna. It specified allocations for the park road vehicle traffic; set out park road maintenance strategies including the preservation of road character; and planned for new visitor facilities including an east-end interpretive center, a replacement of Eielson Visitor Center, a new environmental education center, the closure of the park hotel, and a new food service and gift shop facility. It also planned for administrative facilities including employee housing, a new EMS/fire station building, consolidation of maintenance facilities in the auto shop area, and a new administrative building in the headquarters area.

Environmental Assessment for Construction of New Visitor Facilities in the Entrance Area of Denali National Park (2001). This environmental assessment implemented portions of the 1997 *Entrance Area and Road Corridor DCP.* Most significantly, it called for siting the major new visitor facilities (including the Denali Visitor Center, Murie Science and Learning Center, food service area, and bookstore/gift shop) at the location of the park hotel rather than at the visitor access center. It also provided for re-routing the park road, trail upgrades and reroutes, and the closure of Morino Campground.

Environmental Assessment for Construction of a Springtime Dogsled and Skiing Trail from Headquarters to Mile 7 of the Park Road (2002). This document provided for construction of a 4.5 mile long trail from park headquarters to mile 7 of the park road to be used in late winter and spring by dog mushers, skiers, snowshoers, and other winter visitors.

Gravel Acquisition Plan (2003). This plan provided for five gravel extraction sites at Teklanika River, East Fork, Toklat River, Beaver Ponds, and Downtown Kantishna to serve needs for the next 10 years. Additional sites were identified to be evaluated for future use, including Old Teklanika Pit, Forest View, Boundary, Kantishna Airstrip, Friday Creek, Moose Creek Terrace, North Face Corner, and Camp Ridge.

South Denali [1]

In general, there has been a shared vision among public land managers in the South Denali region that the south side of Denali should provide opportunities for greater visitor use. However, the issues related to development to support increased visitor use have historically generated extensive public controversy.

1960s and 1970s: Parks Highway Proposals

In 1968 the U.S. and Alaska Departments of Commerce proposed a facility at Chulitna Pass. That was followed by a 1969 proposal by the National Park Service and the Alaska Division of Tourism for a facility on South Curry Ridge (DOI 1969). The location at Chulitna, which is only 70 miles from the main entrance of Denali National Park, and lack of existing infrastructure at both sites made these projects unappealing to many people. Neither proposal materialized, though the designation of Denali State Park in 1970 was intended to provide the land base and protections needed for a major public tourism facility (Cresap, McCormick, and Paget 1968).

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[1] The planning history for South Denali is extracted from the 2006 *Final South Denali Implementation Plan and Environmental Impact Statement.*

In 1974 Alaska State Parks proposed a lodge, visitor center, park headquarters, and a downhill ski area at Byers Lake (ADNR 1974 and 1975). This project was let out for competitive proposals and a contract was awarded; however, the successful bidder never seriously pursued the project.

1970s: Peters Hills Proposals

The concept of locating recreation facilities in the Peters Hills emerged from a study undertaken by the state in 1970 to explore ways to increase the role of tourism in the Alaskan economy. One of the study recommendations was the construction of a hotel in the South Denali area. Bradford Washburn, the director of the Boston Museum of Science and world renowned Mount McKinley cartographer, photographer, and mountaineer recommended that visitor facilities be constructed at a site south of the Tokositna River (ADNR and NPS 1980).

In 1972, U.S. Senator Mike Gravel urged the state and the federal government to jointly study the feasibility of locating visitor facilities in the South Denali area. In 1973, the *Mount McKinley National Park Master Plan* (NPS 1973) recommended an expansion of the park boundary to the south and a shift of visitor attention and facilities to the south side. The 1975 *Denali State Park Master Plan* (ADNR 1975) recommended the addition of the Tokositna study area to the state park for the development of visitor and recreation facilities. In 1976, the state legislature added to the state park the land that comprised the study area (ADNR and NPS 1980).

Following these two events, State Senator Patrick Rodey and Representative Clark Gruening, with the strong support of Senator Gravel, sponsored the passage of two appropriation bills in the 1978 legislature. One bill appropriated $310,000 to the Alaska Department of Natural Resources to investigate the feasibility of constructing a lodge and visitor center complex at Tokositna, and the second bill appropriated $85,000 to the Alaska Department of Transportation and Public Facilities to study access to the area. These developments led to a memorandum of understanding, signed in October 1978 by the secretary of the U.S. Department of Interior, the governor of Alaska, and the mayor of the Matanuska-Susitna Borough, to jointly plan visitor facilities and programs in Denali State Park (ADNR and NPS 1980).

In May 1979, the state legislature set up the Tokositna Special Committee, with Senator Gravel, State Senator Rodey, and Commissioner of Natural Resources Robert LeResche as members. The purpose of this committee was to provide direction for the Tokositna project. The vision for this project was a major, year-round tourism and recreation destination that included commercial lodging and a variety of other facilities and services; various outdoor recreation activities including alpine skiing; campgrounds; trailheads; an airstrip; and a Teflon dome enclosure to house many of these facilities. Four reports were produced that deal with the feasibility of developing major recreation facilities at Tokositna: 1) Environmental Investigation and Site Analysis; 2) Market Analysis and Economic Study; 3) Downhill/cross-country Ski and Outdoor Recreation Study; and 4) Transportation Study.

The *Environmental Investigation and Site Analysis* (ADNR and NPS 1980) analyzed key environmental information about the physical aspects of the Tokositna area. The *Market Analysis/ Economic Feasibility Study* (Economic Research Associates 1979) analyzed the potential in-state and out-of-state visitor use demand. The *Skiing Feasibility Analysis* (1979) passed a positive judgment on the feasibility of skiing in the South Denali area: "Based upon the scope and quality of terrain the tentatively selected site compares favorably with other successful ski resorts in the U.S., Canada and Europe" (Sno Engineering 1979). Disadvantages included high

development and operating costs, sensitive environmental and wilderness values, conflicts with existing mining claims, and untested technologies with regard to the Teflon dome enclosure.

1980s: Site Proposals
These studies were followed by a series of site proposals. In 1980 the Alaska Division of Parks and the NPS proposed facilities at the Tokositna site. In 1986 the *Denali National Park and Preserve General Management Plan* proposed cooperative state, federal, and private development of a visitor center/hotel complex on South Curry Ridge (NPS 1986). The plan calls for the development of visitor services and access to the South Denali region to take advantage of the area's dramatically sculptured landscapes and mountain-oriented recreational opportunities, and recommends the project be planned and developed cooperatively with the state of Alaska and with involvement from the private sector.

Three years later the 1989 *Denali State Park Master Plan* proposed a facility for High Lake in the north end of Denali State Park (ADNR 1989; ADNR 1990). The Master Plan recommends facility construction in the South Denali region because, "Tremendous views of the Mt. McKinley massif and the diversity of surrounding areas make the park an appropriate location for a 'South Denali Visitor Complex'. The visitor complex will provide a focal point and staging area for the Denali State Park interpretive program."

The 1986 *South Denali Concept Proposal for Developing a Major Visitor Destination in Denali State Park on the South Side of the Alaska Range* (ADNR 1986) was a product of the Alaska Division of Parks and Outdoor Recreation and the National Park Service. The concept proposed was a major, year-round, destination on South Curry Ridge at the south end of Denali State Park. Facilities included a visitor center, private lodging, restaurants, and other public/private tourist facilities and services.

In 1985 the Alaska Department of Natural Resources (ADNR), in cooperation with the Alaska Department of Fish and Game (ADFG) and the Matanuska-Susitna Borough, completed the *Susitna Area Plan* (ADNR 1985) for general state lands and borough lands within the borough boundaries (15.8 million acres). The plan presents goals, management guidelines, land allocations, and implementation procedures that affect major resources and types of land use.

1990s
Most south side visitor development proposals in the 1990s were rejected because they weren't accessible by road and railroad. Only two points on the main highway system in the south side area offer both railroad access and a good view of Mount McKinley – High Lake and Talkeetna. High Lake was rejected after considerable public opposition and after it was determined to be only marginally feasible for hotel development. In 1990 CIRI proposed a facility about a mile south of the Talkeetna townsite.

In October 1990 the Senate Appropriations Committee directed the National Park Service to address visitor facility development in Talkeetna, Denali State Park, and on the south side of Denali National Park. The 1991 report in response to the directive from the Senate Committee on Appropriations concluded that the CIRI site for a Talkeetna Visitor Center was desirable but there wasn't enough information at the time to evaluate whether it was "practicable" (DOI 1991).

In 1993, the National Park Service published a Draft Development Concept Plan/Environmental Impact Statement. In this draft document, several south side developments were proposed, including an orientation center in the state park along the George Parks Highway, scenic and interpretive waysides along the highway, and public use cabins and backcountry trails. A visitor center/hotel complex in Talkeetna also was evaluated as required by a 1990 Senate Appropriations Committee Directive. This document was withdrawn and no final document was published.

In 1994 at the request of Secretary of the Interior Bruce Babbitt, a Denali Task Force was established to make recommendations on, among other matters, the cooperative management and recreation development of Denali's south side. The task force submitted its final report to the National Park System Advisory Board in December 1994, and the report's recommendations for the south side were adopted by the advisory board without modification (Denali Task Force 1994).

In 1995 the Alaska Visitors Association (AVA) proposed a tram to Alder Point to access South Denali. The AVA recommended further study of a 2-stage aerial tramway at Alder Point extending from the south end of Denali State Park several miles toward, and into, Denali National Park.

In May 1995, south side planning was reinitiated cooperatively by an intergovernmental planning team. Governor Tony Knowles directed the state to take a lead role in this cooperative effort to increase recreation and tourism opportunities on the south side of Denali. The cooperative planning team was comprised of representatives from the National Park Service, State of Alaska, Denali Borough, Matanuska-Susitna Borough, and two Native regional corporations (Ahtna, Inc., and Cook Inlet Region, Inc.). One component of this cooperative endeavor was the preparation of a 1997 *South Side Development Concept Plan/Environmental Impact Statement* (DCP/EIS).

The *Revised Draft* DCP/EIS was filed with the Environmental Protection Agency (EPA) in March 1996 and the final plan was filed with the EPA in January 1997. The selected alternative in the final DCP/EIS provides for enhanced access and recreational opportunities throughout the South Denali region for a variety of visitors, including Alaskans, independent travelers, and package tour travelers, while at the same time protecting the important resource and community values in the area, including the rural lifestyle of local residents. The DCP/EIS plans visitor facilities for the Tokositna area at the western edge of Denali State Park near the end of an upgraded and extended Petersville Road; in the central development zone of Denali State Park along the George Parks Highway; at Chelatna Lake; and in the Dunkle Hills.

The 1997 Record of Decision for the DCP/EIS commits the NPS to take all practicable measures to avoid or minimize adverse environmental effects that could result from implementation of the selected action. These measures include conducting cooperative research on the natural and cultural resources and human uses on the south side; protecting sensitive wildlife habitat and activities; protecting, to the extent practicable, wetlands and vegetation; implementing best management practices to protect water quality and surface water resources; implementing measures to reduce soil loss; implementing measures to reduce the potential for human/wildlife conflicts; protecting archeological and historic resources, as necessary; and incorporating sustainable design principles and aesthetics into facility design and siting.

At the same time, the Matanuska-Susitna Borough finalized the 1998 *Matanuska-Susitna Borough Petersville Road Corridor Management Plan* (MSB 1998). One of the objectives of this plan is to enhance the visitor experience of Petersville Road in conjunction with facility development in the South Denali region. Recommendations include interpretive panels, informational kiosks, vegetative buffers, and retention of scenic qualities along the road corridor.

These planning processes relied heavily on public input; however, portions of the 1997 plan remained controversial even after substantial modifications were made to address public concerns. To address implementation of the south side plan, in 1997 the Governor of Alaska chartered the South Denali Citizens Consultation Committee, which included representatives from south side communities and interested user groups.

The 1999 *South Denali Citizens Consultation Committee Final Report* recommended modifying the development concepts in the 1997 *South Side Denali Development Concept Plan* while remaining consistent with its goals and objectives: to provide resident and visitor facilities throughout the south side of the Alaska Range to meet a wide range of needs and interests of the region's diverse user groups. The committee recommended that a visitor center be constructed along the Parks Highway and a nature center be constructed within the Denali State Park boundary in the Peters Hills to avoid an extensive upgrade of the Petersville Road through the canyon, thereby minimizing impacts to mining and backcountry uses.

2000 and beyond

The 2000-2001 *Denali National Park Business Plan* (NPS 2001b) offers South Denali development as the long-term solution for an alternative tourist destination to Denali National Park and Preserve: "The area offers beautiful views of Mount McKinley and the Alaska Range, glaciers, streams, and much of the impressive array of wildlife for which the Denali Park Road is famous. This alternative visitor destination would be created through partnerships with the state, local communities, and native corporations."

In 2000, the National Park Service received a Congressional appropriation of $162,000 for community planning to mitigate impacts caused by Denali National Park related tourism. The money was used between 2000-2003 for community planning in Talkeetna, Trapper Creek, and the Y area.

In fiscal year 2004, Denali National Park and Preserve received $741,000 to begin the *South Denali Implementation Plan*. A cooperative agreement was finalized between the State of Alaska, Matanuska-Susitna Borough, and the National Park Service to cooperatively plan for development at specific locations to provide new access and increased recreational opportunities in the South Denali region. The completed plan provided for implementation of an enhanced trail system in the south Denali region, improved boat access to the Chulitna River, enhancements along the Petersville Road, protection of scenic qualities, and a new visitor center and parking area near the Parks Highway on south Curry Ridge.

Wilderness Management

The Wilderness Act of 1964 (P.L. 88-577) describes wilderness as an area "untrammeled by man...retaining its primeval character and influence, without permanent improvements or human habitation... [with] outstanding opportunities for solitude or a primitive and unconfined type of recreation." Most of the land within the boundaries of Denali National Park and

Preserve meets the above criteria, offering superlative opportunities for wilderness recreation in an environment where human influences are minimal.

However, the association of Denali with wilderness began before the advent of the Wilderness Act, and before the passage of the 1980 Alaska National Interest Lands Conservation Act, which formally associated portions of the park with the legal designation of wilderness. In fact, the recognition and protection of Denali's wilderness resource values stretches back to the earliest period of the park's history, creating a lengthy legacy of wilderness management. The legal framework and national policy direction for Denali's wilderness management mandate is addressed in Chapter 1 of the *Backcountry Management Plan* (NPS 2006d). This section describes the historic decisions and vision that created Denali's existing wilderness management policy.

Wildlife and Wilderness
At Denali, the protection of wildlife and an intact ecosystem is integral to the present day management philosophy regarding wilderness. Charles Sheldon, Denali's "founding father," first called attention to the importance of wildlife for Denali's wilderness character in his diaries of 1906-1908, published in 1932 under the title *The Wilderness of Denali* (Sheldon 1930). Sheldon and many others who spoke for Denali's establishment clearly had in mind the protection of wildlife as well as the wilderness setting they inhabited; the two values were linked and complementary. The concern for wildlife became a concern for ecosystem protection in later decades, particularly through the work of wildlife researcher Adolph Murie. Murie's authoritative research eventually brought an end to predator control at Denali and established a general policy of avoiding management manipulation of wildlife or ecosystems. Murie's work also established the basis for incorporating the northern additions into the park in 1980, to more completely protect the habitat of major mammal species found in the park.

Development and Wilderness
A second thread of early wilderness protection at Denali was comprised of decisions to minimize or avoid facility development and to strive for the highest possible standard for maintaining a primitive, wilderness landscape throughout the park. Debates over development at then-Mount McKinley National Park were first played out during the NPS Mission 66 program, which advanced many proposals for development in the park interior including hotels, road upgrades, trail and hut systems, and other visitor facilities. The ultimate rejection of most of the proposed facilities and the cessation of road upgrades established a clear direction for the national park – that the undeveloped wilderness character of the park was extremely important and should be preserved.

These decisions were reinforced by the implementation of the bus system to address increased visitation associated with the opening of the George Parks Highway in 1972 and the 1973 Master Plan, requiring visitors to change their usual means of access (private automobile) in order to preserve wildlife viewing experiences and the primitive character of the Denali road. The philosophy was extended to the park backcountry in the 1976 *Backcountry Management Plan*, which affirmed a policy of a "trail-less" backcountry, and the 1986 *General Management Plan* which indicated the park would maintain a "no formal trails" policy in the designated wilderness and extend that policy to the northern additions wherever possible.

Backcountry Visitor Use
A third thread in the protection of the park's wilderness character emerged in the management of visitor use in the backcountry that incorporated the concepts of dispersed use and

use limits. Use limits for the backcountry were established in 1974 as a response to increased interest in backcountry hiking as well as easier access to Alaska and the Denali area. A system of backcountry units was delineated and quotas were set for each unit. The 1976 Backcountry Management Plan affirmed the desirability of the unit system for dispersing use, maintaining opportunities for solitude, preventing trail and campsite formation, and minimizing wildlife disturbance. The plan also noted the utility of the unit system for maintaining freedom of movement and opportunities for self-discovery as well as limiting the consciousness of regulation for visitors in the backcountry.

In 1977 a study by the University of Washington Cooperative Parks Study Unit was conducted to determine visitor opinions about the permit system, compliance with the system, support for other regulations such as wildlife closures, levels of use that created the feeling of crowding, day use activities, and many other basic visitor use statistics that were needed to evaluate the effectiveness and assumptions of the 1976 plan. It was found that the expectations for solitude were not met for the majority of users if they encountered more than two parties per day. In 1978 the average number of parties seen per day was one. Therefore, the expectations of visitors for solitude were being met. Based on this information, use limits could have been increased somewhat above the 1976 plan levels while still meeting the management objective for crowding. Some increases were made in 1982, and overall backcountry visitation was higher than in 1978. The permit system was overwhelmingly supported as were the wildlife closures. The majority of users did not support the further development of trails, designated campsites, toilets, and other backcountry facilities typical of other wilderness areas in the Lower 48. The level of impact in the backcountry in 1978 met visitor expectations for an exceptional wilderness experience.

The 1986 General Management Plan reaffirmed the strategy set forth in 1976 and indicated that areas outside the Old Park could be incorporated into the backcountry unit and quota system as necessary.

Spectrum of Opportunity and Non-Degradation

Advocates of wilderness protection during the Mission 66 debate noted that the wilderness qualities of then-Mount McKinley National Park were much greater than those in other parks, and argued that management should seek to preserve this unique character rather than develop the national park like those in other states. The 1976 Backcountry Management Plan noted that the remoteness of the park backcountry; the absence of typical signs of human presence such as trails, bridges, and established campsites; the existence of native wildlife populations in a largely natural condition; and the opportunity for a high degree of solitude were all "extremely rare and easily degraded resources." The plan direction was to sustain these resources and continue distinguishing the Mount McKinley backcountry from that of other parks in the system.

For Denali, these plans provided the genesis of management practice that favored maintaining Denali to provide a unique park experience and backcountry experience within a spectrum of opportunities afforded throughout the national park system. This evolution at Denali coincided with a national debate over the Eastern Wilderness Act of 1975 during which great concern was expressed that designated wilderness in some of the eastern areas of the U.S., which barely met the basic requirement of the 1964 Wilderness Act, would degrade other areas in the West that were of a higher quality. What clearly emerged from this debate was that the minimum requirements for wilderness designation are a limit, not a goal.

As a result of these debates, the principle of nondegradation has been incorporated into wilderness management (Hendee et al. 1978). As applied to wilderness, this nondegradation principle recognizes variation in the level of naturalness and solitude available in individual wildernesses. The objective is to prevent further degradation of current naturalness and solitude in each wilderness and to restore substandard settings to minimum levels, rather than letting all areas in the National Wilderness Preservation System deteriorate to a minimum standard.

Alaska National Interest Lands Conservation Act (ANILCA)
The passage of ANILCA in 1980 tripled the size of Mount McKinley National Park and recognized the wilderness resource values of the original park and the additions. Section 701 designated 99% of the former Mount McKinley National Park (2.126 million acres) as the Denali Wilderness to be managed under the provisions of the Wilderness Act. Sections 101 and 202 of ANILCA mandated the preservation of wilderness resource values and wilderness recreational activities in the additions, along with related values such as wildlife, wildlife habitat, and undisturbed ecosystems.

Because of the traditional uses and means of access, relatively few roads, great travel distances, areas of vast size, and often severe weather conditions common to most national park system units in Alaska, ANILCA made special provisions for certain types of access and uses in Alaska wilderness that are generally not permitted in wilderness in the lower 48 states. Under reasonable regulations to protect natural and other values, ANILCA specifically allows the use of snowmachines, motorboats, airplanes, and various modes of nonmotorized surface transportation for traditional activities, and for travel to and from villages and home sites.

Wilderness Suitability and Proposal
Section 1317(a) of ANILCA required the Secretary of Interior to conduct a wilderness suitability review for the park additions and preserve, which was included in the 1986 *General Management Plan*. The review concluded that approximately 3.73 million additional acres of the nondesignated lands in the park and preserve were suitable for wilderness designation. An area within the Kantishna Hills was determined to be unsuitable for designation as wilderness because of persistent disturbance caused by past mining activity, although since that determination all mining has ceased, many private inholdings have been acquired, and much of this land has been restored, so these lands now share similar values as the rest of the park additions. Various alternatives for additional wilderness designation were subsequently evaluated in an Environmental Impact Statement (NPS 1988d) to assist in fulfilling ANILCA 1317(b), which required the President to recommend wilderness designations to Congress in accordance with the process outlined in sections 3(c) and 3(d) of the Wilderness Act. Of the 3.73 million acres of suitable lands, the preferred alternative proposed 2.25 million acres to be recommended for wilderness designation. However, the Secretary of the Interior did not forward the recommendation to the President, so the process prescribed by ANILCA 1317(b) and the Wilderness Act 3(c) and 3(d) was not completed.

General Vision and Visitor Use

In 1972, when the George Parks Highway opened, visitor use at Denali totaled 88,615. Over the next 12 years visitor use grew at an average rate of 25,000 visitor days per year to a total of 394,426 visits in 1984. The escalating demands on Denali's resources, coupled with the need to provide a visitor experience equal to the resources, is the single most critical problem facing park managers. The solution presented in this plan is to expand recreational opportunities on the south side of Denali, then to modify use on the north to protect resource values. Based on current trends it is expected that the demand for use of Denali will increase by another 250,000 people by the end of the 10 year planning period. This amount of additional demand cannot be accommodated in the existing park road corridor without a significant decline in the visible wildlife, but it can be accommodated if the south side is developed as an alternative destination for visitors. [2]

The southern expansion of Denali National Park to the boundary of adjoining Denali State Park has created an opportunity to add a new dimension to the Denali experience. The established uses of the "Old Park" will continue while work is undertaken to develop Denali State Park and the south side of Denali National Park for expanded and diversified visitor use. Together the north and south sides will offer a large range of visitor experiences geared to the full complement of Denali's outstanding natural resources. Developed in this way, the parks should be able to meet visitor demands for many years.

Management Zoning

As a basis for all subsequent land use planning, zoning broadly delineates the appropriate management strategies for various lands, based on their resource characteristics and how they can best be used to achieve the park's purpose and objectives. Areas of Denali will be placed in four management zones natural, historic, park development, and special use. The management emphasis for each zone is described below.

Natural Zone

Lands and waters in this zone are managed to protect natural resources, processes, and habitat for wildlife, and to provide opportunities for recreational activities. Subsistence uses by local rural residents are permitted in the 1980 additions to the park where such uses are traditional in accordance with the provisions of title VIII of ANILCA. Because of the relatively pristine nature of the park, more than 97 percent of the total acreage is in this zone. This zone includes those lands either designated as wilderness or determined suitable for designation as wilderness. These lands will be managed to ensure that natural processes prevail. Those uses compatible with the 1964 Wilderness Act and special uses allowed by ANILCA will be permitted in this subzone.

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[2] Current information on visitation is maintained in the NPS Monthly Public Use Report database, available online at http://www2.nature.nps.gov/stats/. In 1996, the methodology for estimating visitors was changed, so figures from 1996 forward are not comparable to earlier numbers. Official visitation in 2006 was 415,935. Projections completed in 2005 estimated between 409,273 and 666,091 visitors by 2015. (see HDR 2006, *Needs Assessment and Feasibility Study for a Community Transportation System*)

The 2006 Backcountry Management Plan subdivides the Natural Zone identified in the 1986 General Management Plan into a variety of more specific management areas. Each of these management areas reflects an overall management concept or vision and provides for a related set of opportunities in the backcountry. Each area is defined by a set of desired future resource and social conditions. Allocation of management areas is a prescriptive process that describes the desired condition rather than the existing condition.

For all areas, common management policies apply to subsistence activities, fire management, cultural resources management, natural resources management, and reclamation as expressed in other plans. These plans include:

- *Subsistence Management Plan (2000[3])*
- *Fire Management Plan (2004)*[4]
- *Resource Management Plan (1998)*
- *Reclamation Plan (2001)*

Appendix A contains the description of each of the subzones/management areas.

Management Area Designations
Management areas apply as depicted in Map 2. The percentage of the park and preserve allocated to each management area is as follows:

Table 1: Area of Park and Preserve by Management Area

Management Area	Acres	% Backcountry
A	358,256	6%
B	962,244	16%
C	312,469	5%
D	2,242,454	38%
OP1	1,408,886	24%
OP2	737,409	11%
Total	6,028,202	100%
Special Use Areas	150,269	2.5%

Summer season Corridors are designated as follows:
- Kantishna and Muddy Rivers (56 miles)
- the lower Tokositna River (4 miles)
- Skyline and Moose Creek former mining access routes in Kantishna (10 miles).

If demand is sufficient, the National Park Service could also designate the following winter season Corridor management areas:
- three Corridors from the southern park boundary to the Old Park boundary near West Fork Chulitna River, Bull River, and Cantwell Creek (12.5 miles)
- the lower Tokositna River (4 miles)
- the upper Tokositna River to the mouth of Wildhorse Creek (3 miles).

[3] The *Subsistence Management Plan* was most recently revised in 2004.

[4] The 1998 *Resource Management Plan* will be replaced by a **Resource Stewardship Strategy** per new direction from Directors Order 2-1 and consistent with the 2006 NPS Management Policies.

All Corridors are depicted on Maps 13, 14, 17, and 18.

The Ruth Glacier Special Use Area is designated to include areas of the Ruth and Tokositna Glaciers as shown on Map 15. Backcountry Hiker designations are described below under Backcountry Facilities.

Major Landing Areas and Portals are designated as follows (see Map 15):

- Major Landing Areas – Kahiltna Base Camp and Ruth Amphitheater
- Portals – Pika Glacier, Coffee Glacier, Buckskin Glacier, Eldridge Glacier, and upper Tokositna Glacier.

The locations of Major Landing Areas and Portals could be adjusted to respond to changes in the glaciers; however, the number and approximate size of the Major Landing Areas and Portals would remain the same as these adjustments occur.

The West Buttress Special Use Area is designated to include the entire West Buttress route on Mount McKinley, from the Old Park boundary at the Kahiltna Base Camp portal to the summit of the mountain. Existing backcountry trails (those that extend beyond the development zones and Backcountry Day Use Areas described in the 1997 *Entrance Area and Road Corridor DCP)* are designated as Backcountry Hiker areas. These trails include the following:

Table 2: Existing Backcountry Trails

Trail	Distance (miles)*	Distance (feet)	Width	Type
Eielson Alpine	0.8	4,118	1.5	unpaved hand
Gorge Creek	0.2	1,056	1.5	unpaved hand
McKinley Bar	2.2	11,563	2	unpaved hand
Savage Cabin	0.3	1,531	8	crush stone
Savage River	1.7	8,870	2	unpaved hand
Spring dog/ski trail	4.3	22,440	8	unpaved hand
Triple Lakes	7.6	39,970	2	unpaved hand

*Distance includes portions of the trail located in frontcountry areas which are classified as "Pedestrian" or "Hiker" areas, described in Appendix B.

Historic Zone

Lands in this zone are managed primarily to preserve cultural resources. In Denali this zone includes all the sites and structures that are listed on or are eligible for the National Register of Historic Places. Appropriate uses in this zone include visitor appreciation and study of cultural features and adaptive use of historic structures for other park purposes. Most historic zone structures and districts are depicted on Maps #5, 8, 9, 11, 12, and 13, but these maps do not include some of the park's remote patrol cabins.[5]

[5] As of 2006, National Register listed structures and sites include most of the park's patrol cabins (Lower Windy, Upper Windy, Riley, Lower Savage, Sanctuary, Igloo, Sushana, East Fork, Lower East Fork, Upper Toklat, Pearson, Lower Toklat, Thorofare, Moose Creek), the Headquarters Historic District, and two Teklanika River-area archaeological sites. Structures and sites determined eligible but which are not listed include the Wonder Lake Ranger Station, C-Camp Recreation Hall, Eielson Visitor Center site, Kantishna Roadhouse, Fannie Quigley Residence, Busia Cabin, Banjo Mill, Upper Caribou Creek Historic Complex, Glacier City, Stampede Mine, and two additional archaeological sites (MMK-027 and MMK-029).

Park Development Zone

Lands in this zone are managed to accommodate major development and intensive use. In Denali this zone includes the road corridor and all lands where major facilities exist. This zone and its subzones are described in Appendix B and depicted on Maps 3 to 11.

Inholdings Special Use Area.

Lands in this zone are owned or used by parties other than the National Park Service. In Denali this zone includes privately-owned lands, some unpatented mining claims in the Kantishna Hills, lands conveyed to the State of Alaska, and certain segments of the State road and railroad right-of-way easements. The National Park Service recognizes these inholdings and respects the rights of the landowners. Inholdings are located primarily in the Kantishna area and the northwest part of the preserve, with a few on the south side of the Alaska Range such as the Mountain House in the Ruth Amphitheater and the Tokosha Mountain Lodge along the Tokositna River. These inholdings remain in the Special Use zone as described in the 1986 General Management Plan. The name for that management zone is modified to Inholdings Special Use Area to distinguish it from the Ruth Glacier and West Buttress Special Use Areas described below. Most of the areas zoned in this category are depicted on Maps #11, 12, 13, 15, 17, and 18. Those private lands designated Special Use in the 1986 General Management Plan, but which 1) have been acquired by the National Park Service, and 2) are within the geographic scope of the backcountry management plan, are included within the new management areas described by this plan.

Visitor Experience/Resource Protection

Implement a visitor experience and resource protection program such as that described below to prevent problems resulting from visitor use.

The National Park Service is currently developing a visitor experience and resource protection (VERP) program for addressing carrying capacity based on the U.S. Forest Service limits of acceptable change methodology and NPS management policies. This process will ultimately provide the tools necessary for the National Park Service to fulfill its obligations to address visitor carrying capacity for parks and to safeguard the quality of park resources and visitor experiences. [6]

Carrying capacity at many parks has usually been addressed and defined in terms of physical or facility design limits. The implication was that if these limits were exceeded, carrying capacity was exceeded and the park would have to develop more facilities. For example, carrying capacities at many parks were often based on factors such as the number of cars and buses that could be parked in the parking lots at one time or on how many people could be accommodated in a visitor center or other facilities at one time.

These traditional definitions of carrying capacity address visitor access to a park and park resources and not the quality of the experience or resource protection issues. When facility limits were reached, vehicles were turned away from entering the park or visitors had to wait in line to enter. Parks were essentially managing for visitor access. The VERP process changes the emphasis from facility capacity to visitor experience and resource protection concerns.

[6] The VERP process is now more fully developed and has been implemented at several parks.

The VERP process defines carrying capacity as "the type and level of visitor use that can be accommodated while sustaining the desired resource and social conditions that complement the purposes of the park units and their management objectives." VERP emphasizes managing to achieve and maintain predetermined social and resource conditions. Providing for a high quality visitor experience and resource protection are the goals of management as opposed to simply providing for unlimited use of park resources.

In this context, carrying capacity represents a desired set of conditions that are influenced by visitor use rather than a specific number of visitors. This concept can be applied proactively to better manage a park.

Denali National Park and Preserve is under increasing pressure to accommodate more and more visitors while still providing a quality experience and protecting park resources. VERP would provide a framework for proactive management of the park to meet these challenges.

The National Park Service is currently testing the VERP process at several parks. This development concept plan provides a basis for beginning to address the carrying capacity of Denali and is being completed consistently with the VERP process. The plan identifies general management goals, management subzones, and management strategies. Specific desired conditions and key impact indicators still must be identified and desired conditions must be compared with existing conditions. Adopting this approach to carrying capacity will also require the park staff to establish monitoring and evaluation procedures to ensure that acceptable resource and social conditions are achieved and maintained.

Upon NPS approval of the VERP methodology and approval of this development concept plan, VERP will be fully implemented at Denali.[7] In the interim, park staff will monitor park resources and visitor use to determine whether or not carrying capacity is being exceeded in any subzone. The expected level and types of visitor use and facility development proposed in this development concept plan are not anticipated to result in unacceptable impacts on the desired visitor experience or on the park's natural and cultural resources. However, if monitoring shows that the carrying capacity has been exceeded, the National Park Service would take actions to restore conditions to acceptable levels, such as restricting visitor use or modifying facilities.

For the life of this plan, park visitation is expected to be controlled by limits on road use, by the quantity and quality of facilities, and by park management actions. Use of VERP will enable the park to avoid some of the problems that other parks have experienced when visitor use has not been managed to protect the quality of the visitor experience or the resource base.

Under the proposed plan the VERP program will be implemented as described above. Management zoning will be as described above and in appendices A and B.

Transportation and Access

The primary method of access into the northern portion of Denali will continue to be the shuttle bus transportation system, and private and commercial traffic will continue to be restricted. For the immediate future, the primary method of access into the south side of the national park will continue to be aircraft. As part of more detailed studies, the feasibility of expanded aircraft

service from a nearby location will be evaluated. Studies will also be conducted to determine the feasibility of other forms of access to features in the state and national parks.[8]

The various types of access discussed in the remainder of this section may overlap. For example, a valid RS 2477 right of way may overlap an easement conveyed under section 17(b) of ANCSA. Where this occurs, management will reflect all the valid existing rights and other considerations unique to the situation. The National Park Service will work cooperatively with interested parties to ensure that management is compatible with the purposes of the park and preserve. Overlap situations will be dealt with on a case by case basis in conformance with the general management policies outlined below.

Access and Transportation Planning

Planning for the various topics described in this access section will be an ongoing process. The National Park Service will continue to document past and current uses of the park and (where applicable) inventory access routes and study special issues as described below. This process will of necessity be accomplished in phases over a period of several years. In carrying out this process of inventorying and collecting information, the National Park Service will consult with interested agencies, organizations, and individuals. When sufficient information has been gathered on a particular topic, the National Park Service, in consultation with others, may propose further action. Actions may include developing further management policy; proposing closures, restrictions, or openings; proposing access improvements; or proposing revisions to existing policies or regulations. Pursuant to section 1110(a) of ANILCA, 36 CFR 13.30 and 13.46, 43 CFR 36.11(h), and NEPA where applicable, adequate public notice and opportunity to comment will be provided.[9]

Entrance Area Transportation and Parking

Private vehicles will arrive at the entrance station immediately after leaving the Parks Highway. Drivers will obtain basic directional information at the station. They will be directed to the new visitor services building for additional park information and to purchase tickets for a bus trip into the park interior. Short-term and long-term parking as well as a bus staging area will be located in this area. The parking area will include about 250 spaces, with 60% for autos and 40% for RV use. Visitors wishing to use the interpretive and discovery center could reach that facility by either walking on a 1/4 mile nature trail from the new parking area or by driving around to the existing visitor access center parking lot.[10]

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[7] The VERP process was more completely implemented with the 2006 *Backcountry Management Plan* than with the 1997 *Entrance Area and Road Corridor DCP*, for which this text was written. Additional development is still needed for indicators and standards of visitor experience and resource conditions in frontcountry areas, which should occur within development of the park's Resource Stewardship Strategy.

[8] The 1997 *South Side Denali DCP* and 2006 *Backcountry Management Plan* provided updated guidance on south side access but confirmed this general premise. The Talkeetna state airport has proven capable of handling dramatically expanded aircraft access to Denali, and the Alaska Department of Transportation and Public Facilities has completed a *Talkeetna Airport Improvements Environmental Assessment* (2007) that describes infrastructure improvements to accommodate additional aircraft activity. The Alternative Transportation Modes Feasibility Study (BRW 1994) included investigation of alternative means of reaching south side destinations.

[9] *The General Management Plan* and its amendments, particularly the 2006 *Backcountry Management Plan*, included extensive public consultation and planning regarding access and transportation. Combined with other investigations such as accompanied the 2000 *Environmental Assessment for a Proposed Permanent Closure of the Former Mount McKinley National Park to Snowmobile Use* and the 2005 *Cantwell Subsistence Traditionally Employed ORV Final Determination*, this requirement has been fulfilled.

[10] The 2001 *Environmental Assessment for Construction of New Visitor Facilities* changed the site of the interpretive center to the location of the former park hotel. The existing Visitor Access Center was retained as the location for obtaining bus tickets, campground permits, and backcountry permits. Its name was changed to Wilderness Access Center.

Private vehicles will be allowed on the park road to Savage River.

Shuttles will continue to provide service to the Riley Creek campground, the new visitor services center, and the headquarters area. These shuttles could also provide service for employees with on-demand stops at C-Camp. Shuttle service will be implemented to connect the new visitor services building with the Savage River campground and rest area, providing access to proposed new trails in that area. As mentioned above, this service will be provided at minimal cost to visitors and could be initiated with the existing visitor transportation system.

The concession-operated tour buses will load and unload passengers at concessioner lodging facilities outside the park with stops in the entrance area as needed. The concessioner courtesy buses will load and unload passengers staying in concessioner lodging at the railroad depot and other locations as necessary. Other lodging and tour operators will provide courtesy shuttle service between the depot/entrance area facilities and their facilities. [11]

Kantishna lodging operators will continue to offer shuttle service from the park entrance to their facilities. Kantishna passengers and employees will park their vehicles in a new parking lot on the former airstrip site. [12]

Existing pedestrian trails will be used with trailhead modifications and new connections to link the new visitor services center, the camper conveniences center, and the interpretive and discovery center. A bicycle/foot trail will connect visitor services inside the park with those outside via a bridge over the Nenana River. [13]

Park Road Management

Road Use/General Vision and Goals

During the 70 years of National Park Service stewardship at Denali, the visiting public has been accommodated almost exclusively along the park road corridor, where the principal experience has been viewing Mount McKinley and the park's fascinating wildlife. Within the past 15 years, however, since the completion of the George Parks Highway and the associated dramatic increase in visits to Denali, the National Park Service has become aware that increasing traffic has been detrimental to opportunities for viewing wildlife along the park road corridor.

In 1972, the year the Parks Highway opened, a mandatory public transportation system was instituted, and only visitors with overnight or other special use permits were allowed to drive their cars beyond Savage River. Because of significant increases in visitor use over the next decade, by 1981 the level of bus and permitted private vehicle traffic had increased 50 percent and was again recognized as a threat to wildlife viewing. A special wildlife study undertaken that year and completed in March 1984 concluded that the traffic increase between 1974 and

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[11] The 2006 *Needs Assessment & Feasibility Study for a Community Transportation System*, Denali National Park and Preserve, concluded that a consolidated public transit system would provide better, more user-friendly visitor service at lower overall cost than existing courtesy transportation.

[12] The 1997 *Entrance Area and Road Corridor DCP called for the McKinley Park* airstrip to be closed. This action was deferred for the foreseeable future in the 1999 *Environmental Assessment for Proposed Expansion of the Alaska Railroad Depot*. Kantishna guests are asked to park in the Riley Creek overflow parking area.

[13] These trails and the pedestrian bridge were all completed by 2005.

and 1981 had not had a significant effect on overall populations in the area, but that it had caused many moose and bears to avoid using the road corridor. In addition to the demonstrated effect of reducing the number of moose and bears that utilize habitat in the immediate vicinity of the road, there is concern that increasing traffic might eventually disrupt the movements of migrating herds if the spacing between vehicles becomes too short.

In an effort to allow as many people as possible to view all of the big four Alaskan wildlife in their natural habitat, the National Park Service will make additional use of the shuttle bus system and allow fewer private vehicles on the park road. It has been demonstrated that the activities associated with private vehicle use cause the greatest disturbance to wildlife, as evidenced by their avoidance behavior, because the occupants of private vehicles can stop at will and approach the animals on foot, while visitors riding shuttle and tour buses are not allowed to leave the vehicles in areas of critical wildlife habitat. [14] Buses also have the obvious advantage of carrying up to 40 people per vehicle, compared to the average carload of three people per vehicle. In implementing this concept the National Park Service will continue to start the operation of the shuttle bus system during the Memorial Day weekend and will extend it into the fall for as long as visitor use remains high.

Traffic levels will be reduced in three stages. During stage one, total bus traffic will be held to the 1984 monthly averages plus 15 percent to allow the shuttle bus and tour bus service to be tailored more closely to daily fluctuations in demand. Private vehicle traffic will be reduced by decreasing vehicle use by campers, professional photographers, NPS employees, and people traveling to Kantishna. During this stage, some of the interior campgrounds will be accessible only by shuttle buses designed to carry extra camping equipment. Shuttle buses will also be used increasingly for employee travel to duty stations in the park and for public travel to Kantishna. Customers of visitor services in Kantishna will use the company vehicles or the NPS shuttle buses. A specially designed bus will carry most handicapped visitors into the park. Professional photographer permits will be managed to reduce the use of private vehicles. Impacts on wildlife along the road corridor will be monitored to determine the effects of decreasing traffic levels.

During stage two, bus traffic will continue to be held to 1984 levels plus 15 percent. Private vehicle use will be further reduced by making all the interior campgrounds accessible only by shuttle bus. Campers will still be allowed to drive to the Savage River campground, but not to any of the campgrounds beyond that point. [15] There will be further review of wildlife viewing opportunities at this stage. NPS travel should be reduced once large road construction projects are completed. This traffic is currently being monitored.

During stage three, after total traffic levels have been reduced and the effects have been monitored, tour and shuttle bus use will be allowed to increase to a level that does not unacceptably affect wildlife behavior. It is anticipated that if private vehicle traffic can be reduced by 45 percent, bus traffic can then be increased by 20 percent while still achieving an overall decrease in total traffic of 17 percent (see Table 3). As a result of these actions, up to 24,000 additional visitors per year can be accommodated with less disturbance to wildlife behavior.

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[14] NPS 1984 (Singer and Beattie)

[15] A temporary allowance for campers to drive personal vehicles to Teklanika Campground with a minimum 3-night stay was made permanent in the 1997 *Entrance Area and Road Corridor DCP.*

Table 3: Proposed Changes in Traffic Levels

	Annual Allocation Season		
	1984	At Full Plan Implementation	Net Change
Tour and shuttle buses	4,245	5,094	+20%
Private vehicles	6,662	3,664	-45%
NPS vehicles	1,754	1,754	0%
Total traffic	12,661	10,512	-17%

Based on past trends, the proposed 20 percent increase in bus service will not be enough to accommodate all of the demand. Visitors who cannot be accommodated on the north side of the park can be accommodated on the south side once the proposal for south side development is implemented; however, the proposals for the north side are not dependent on the south side proposals being implemented.

Retain annual allocation season limits (10,512) for total number of vehicles set in the 1986 *General Management Plan*. The annual allocation season is defined as the Saturday before Memorial Day through the second Thursday after Labor Day. [16]

Continue to require operating plans containing tour objectives and detailed management strategies from the concessioner for both tour buses and the visitor transportation system.

Continue to establish formal limits and guidelines for the visitor transportation system.

Continue to require comprehensive training for all bus drivers, including those driving buses to Kantishna businesses.

Keep bus parking and maintenance at the existing locations within the park with no further expansion beyond the limits defined in the 1994 *Environmental Assessment on the Proposed Construction of Visitor Transportation System Facilities.*

Continue to define the bus transportation operating season as beginning approximately May 15, depending on weather and road conditions, and ending with road closure pending weather conditions in September.

Retain the current daily limits on the tundra wildlife tour (30 buses per day).

Implement regulations on rules of the road and oversized vehicles.

Continue monitoring wildlife behavior, visitor satisfaction, and impacts from visitor use.

Retain "Rules of the Road" that apply specifically to bicycles traveling west of the Savage River check station and provide this information at all visitor orientation points including the Savage River check station.

[16] Regulations at 36 CFR 13.63(d)(2) completed in 2000 define the allocation season as "Saturday of Memorial Day weekend and continues through the second Thursday following Labor Day or September 15, whichever comes first."

General Vehicles. The National Park Service will implement the following actions:

Phase 1:

- Promulgate special regulations for management of the park road, establishing the GMP limit of 10,512 vehicles during the allocation season in regulation, setting formal "rules of the road," and setting an allocation season limit for Kantishna business traffic. [17]

- Complete the three-year study of wildlife behavior and visitor satisfaction initiated in 1996. [18]

- Initiate reductions in professional photography vehicle permits and reallocate to the "annual bus" category on a trial basis. (See phase 2 for details of full implementation.)

- Set the shoulder season (approximately May 15–25 and September 15–closing) vehicle limits for the park road at existing numbers (a maximum limit of 20 buses per day) pending additional information on wildlife behavior and visitor satisfaction gathered during a study initiated in 1996.

- Retain existing allocation season limits for the visitor transportation system (3,394 buses) and the tundra wildlife tour (2,089 buses).

- Establish a daily limit of 20 buses for the Denali natural history tour and 30 buses for the tundra wildlife tour, and set the daily limit for the visitor transportation system at 36 based on data from 1990 to 1996.

- Retain Primrose pullout as the turnaround point for the Denali natural history tour. This tour will not count toward GMP traffic limits.

- Continue to work with the concessioner to improve overall operation and efficiency of the shuttle bus system.

- Designate a "no parking" zone at the north end of Wonder Lake from the ranger station to the former gravel pit approximately 1/4 mile north of the lake outlet.

- Retain the mid-September road lottery limit of 400 vehicles per day for each of the four days of operation.

Phase 2:

Upon adoption of formal regulations for management of the park road, the National Park Service will implement the following actions:

- Evaluate shoulder season limits based on additional information on wildlife behavior and visitor satisfaction gathered during the three-year study initiated in 1996. The length of the shoulder season will continue to depend upon weather conditions. Also

[17] This provision has been implemented through a special regulation at 36 CFR 13.63(d)(2). See Appendix H.

[18] This study was completed and published: Burson et al. 2000. A new three-year study addressing similar issues was initiated in 2006.

based on study results and resource conditions, the daily limit for the Denali natural history tour will be reevaluated. [19]

- Continue to evaluate daily limits for the tundra wildlife tour and the visitor transportation system based on information gathered through continued research and monitoring.

- Reduce professional photography vehicle permits by 50%, consistent with direction in the 1986 GMP that "private vehicle traffic will be reduced by decreasing vehicle use by campers, professional photographers, NPS employees, and people traveling to Kantishna".

- Reallocate the additional vehicles (formerly professional photography vehicle permits) to a new "annual bus" category within the 10,512 seasonal allocation.

- Reallocate available permits as an annual operating decision to retain flexibility between bus systems. At least 400 buses will be available, with up to 150 more depend ing on the level of traffic in other categories of the overall 10,512-vehicle allocation, which will not be exceeded. This change will be phased in and will depend on study results and resource conditions for full implementation.

- Establish a daily limit of six buses for the new "annual bus" category. [20]

- Adjust the remaining vehicle permits allocated to professional photographers to meet varying demand during the season, with more permits available during early and late summer than during the month of July.

- Continue to work with professional photographers to improve the efficiency and effectiveness of the permit system. Administrative changes such as peer review of permit applications, more stringent standards and enforcement, and implementing a system of reallocating permits when photographers either did not show up or left the park early could be made to improve the system.

- Expand courtesy shuttle service in the frontcountry to connect entrance area facilities with businesses outside the park and to serve the Savage River campground and trail heads (for proposed new trails) at minimal cost to visitors. This service could be phased in using the existing VTS buses initially and providing separate buses when needed. [21]

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[19] In 1998, the daily limit for the Denali Natural History tour was raised to 22, and in 1999 to 23, through contract amendments.

[20] Plan provisions related to reducing professional photographer permits and reallocating to an "annual bus" category have been completed.

[21] Courtesy service has been extended to Savage River. The 2006 *Needs Assessment & Feasibility Study for a Community Transportation System* (HDR 2006) concluded that a consolidated public transit system connecting the park entrance to the communities and businesses outside the park would provide better, more user-friendly visitor service at lower overall cost than the existing courtesy transportation provided by individual businesses.

Phase 3:

- Upon completion of repairs to the park road west of Eielson Visitor Center, replacement VTS buses for use on that section will be the same as VTS buses used on the remainder of the road.

- Continue monitoring wildlife behavior, visitor satisfaction, and impacts from visitor use. Future changes affecting traffic on the park road will be based on results of this long-term monitoring. [22]

Kantishna Traffic. The following actions affecting traffic to Kantishna businesses will be implemented as part of phase 1. Limits for Kantishna business traffic to provide for adequate access to Kantishna businesses will be within the road traffic limits established by the 1986 General Management Plan. Building on the general concepts in the plan to establish more specific limits for Kantishna traffic will help ensure long-term protection of the current visitor experience and of wildlife populations along the road corridor. Kantishna businesses could continue using both the Kantishna airstrip and the visitor transportation system for guest access, and they could run buses and other vehicles on the park road subject to the limits listed below.

Overall limits for Kantishna business traffic will be based on current use levels (1994–96 seasons). New limits will allow for some additional expansion as long as the businesses continued current patterns of transporting guests to and from Kantishna. The following limits for the total number of round trips of any type for the allocation season will be phased in over the next three years.

- Denali Backcountry Lodge: 315
- Kantishna Roadhouse: 420
- McKinley Gold Camp: 210 [23]
- North Face/Camp Denali: 315

The businesses could determine the types of vehicles to run, subject to the overall limit and other road use restrictions, to best suit their individual needs. However, RV travel (motorhomes, trailers, campers) for the purpose of transporting guests to and from Kantishna businesses will not be allowed. Permits or allocation numbers will not be transferable from one business operation to another. Business operations that exceeded the above limits in the 1994–96 seasons will be given three years after plan implementation to adjust traffic to the new limits.

Additional permits could be allocated to another Kantishna overnight lodging business based on the criteria in 43 CFR Part 36. This will require the National Park Service to apply the provisions of the National Environmental Policy Act to determine whether an environmental assessment, environmental impact statement, or categorical exclusion applied for each specific permit application. In all cases, the overall allocation season traffic limit of 10,512 vehicles will apply. Therefore, new businesses will have significantly fewer permits available than any of the existing Kantishna businesses. New overnight accommodations such as the proposed hostel will also be encouraged to use the existing transportation system for guest access and to work in partnership with existing businesses for administrative and other travel.

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[22] A new 3-year Road Capacity Study was initiated in 2006.

[23] McKinley Gold Camp ceased to operate in the late 1990's.

Up to 1,360 total vehicles could travel to and from Kantishna, comprising 13% of all traffic under the GMP limits. This total includes other Kantishna traffic (individual inholders, mining claim owners, and others), which has averaged less than 100 vehicles per year recently and could be expected to decline slightly as former mining claims are acquired by the federal government.

Bicycles. The National Park Service will establish a permit system for bicycle use west of the Savage River. This will function primarily as a registration system and numbers will not initially be limited, pending continued wildlife monitoring. This permit system will also apply to the Kantishna Hills.

"Rules of the Road" for bicycles will continue, and this information will be available at all visitor orientation points, including the Savage River check station.

A bicycle/foot trail will be constructed and maintained to connect the Nenana River canyon to the entrance area.[24] Gravel shoulders constructed along the paved section of the park road to enhance wildlife viewing will be available to cyclists also.

Park Road Character & Maintenance

Continue to implement road repair projects based on site-specific project design and internal review with superintendent approval.

Implement new methods for improved subgrade drainage systems, structural repairs, and adequate surface material on the park road. (See Appendix C for an explanation of methods.)

Repair road failures as they occur.

Continue to realign road surface in slump areas by importing or using local materials to keep the vertical alignment within safe standards.

Continue study of road condition, renewable materials sources, and annual gravel loss, and document road character.

Use the Toklat River and Teklanika Pit as materials sources.

The National Park Service will take the following actions affecting the park road:

Maintain road character as defined in Appendix C. [25]

- Complete priority 1 and priority 2 repair projects (see Appendix C). Priority 1 projects include correcting safety problems by improving site distance, providing for safe vehicle passing, improving road surface friction, repairing culvert crossings, and repairing curve superelevations. Priority 2 projects include repairing shear failures, slumps, active road surface pumping, road rutting, and inadequate subgrade drainage.
- Road repairs will treat the underlying causes of road failures to reduce the need for repetitive repairs and minimize gravel use over the long term.

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[24] This trail was completed in 2005

[25] The 2006 *Denali National Park and Preserve Road Design Standards* provides specific standards for the principles articulated in Appendix C.

- Purchase gravel from private landowners or acquire from previously disturbed park lands in the Kantishna area, provided that specifications for maintenance and repair on the west end of the park road could be met. Gravel extraction from previously disturbed park land will include subsequent reclamation. Once Kantishna sources are no longer feasible, an additional gravel source could be developed along Moose Creek approximately 2 miles upstream from North Face Lodge. [26]

- Establish an additional gravel source in the Teklanika River near the Teklanika Campground to supplement the existing upland pit nearby, pending additional information on feasibility. The upland site will continue to be the gravel processing location and will not be expanded. Gravel processing and hauling could occur from two different sites at the same time. [27]

- Relocate the gravel crushing operation near the existing Toklat rest stop to the north end of the Toklat road camp. [28]

- Complete the five-year study of dust palliatives and particle binders initiated in 1994 and implement the resulting recommendations. This research includes monitoring of effectiveness, environmental impacts, and safety. The study area will be expanded to up to 15 miles of the park road, with supplemental water treatment for dust control on other selected sections of the road. [29]

- Construct an additional 8-foot gravel shoulder along the paved section of the park road from mile 8 to the Savage River where topography and resource conditions allow. This will provide for safer, more leisurely scenery and wildlife viewing as well as a margin of safety for bicycle traffic. Gravel for this project will be obtained outside the park.

During winter months, snow on one lane of the park road will continue to be packed from the Headquarters gate to Mile 7 to allow maintenance activities that prevent the buildup of ice on the road in this section. Snow will not be removed from the road until necessary to prepare the road for summer season use. This section of the park road will be designated a Backcountry Hiker area during winter months.

Dunkle Hills Road

The state right-of-way into the Dunkle Hills and Golden Zone areas [30] could provide increased public access opportunities for hiking, bicycling, and mining-related interpretive opportunities once land status issues are resolved. Access to mining-related interpretation and private inholdings will be the primary function of the main portion of the right-of-way, which leads south across the West Fork of the Chulitna River to the Golden Zone area. The other portion of the right-of-way, which diverges from the Golden Zone route and leads

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[26] The *Gravel Acquisition Plan* (2003) provided updated guidance, designating five gravel extraction sites at Teklanika River, East Fork, Toklat River, Beaver Ponds, and Downtown Kantishna to serve needs for the next 10 years. Additional sites were identified to be evaluated for future use, including Old Teklanika Pit, Forest View, Boundary, Kantishna Airstrip, Friday Creek, Moose Creek Terrace, North Face Corner, Camp Ridge, and other locations north of the Kantishna airstrip.

[27] The *Gravel Acquisition Plan* (2003) provided updated guidance. See previous footnote.

[28] This relocation was completed by 2004.

[29] This research was completed and a monitoring protocol implemented. *Denali Park Road Chloride Sampling protocol* (NPS 2005b).

[30] See Map 14.

northeast into the Dunkle Hills, will be primarily for hiking and bicycling, subject to valid existing rights. For the purposes of analysis, this DCP/EIS assumed construction of a trailhead along the right-of-way at or near the national park boundary to provide improved access to Denali National Park and Preserve and a gravel parking area for 10 vehicles at or near the trailhead.

Due to the important calving habitat it provides for the Denali Caribou Herd, management of the Dunkle Hills area around the northern right-of-way section will emphasize low density, primarily nonmotorized human activities. This area will provide increased backcountry and day hiking opportunities for visitors to Denali National Park and Preserve. Management intent for the right-of-way will be developed in consultation with affected inholders and with the concurrence of the state, which retains jurisdiction over use of the right-of-way. Future specific proposals (e.g., those that will increase public access into the Dunkle Hills area) will require additional, site-specific environmental evaluation and public review.

Backcountry Access

General Guidance

Access to all parts of the Old Park, park additions and preserve will be managed to achieve management area standards using the tools identified below. Recreational access to the Old Park will continue to be managed to emphasize non-motorized access, but this area will be accessible by airplane and motorboat. The National Park Service will actively identify locations in the Old Park that have ecological, wildlife, or other resource values that are at substantial risk of harm from airplane landings or motorboat use, and locations where these modes of access will cause unacceptable impacts to visitor safety. The National Park Service will close or otherwise manage motorized access to these areas as appropriate to alleviate the resource and safety concerns. In the park additions and preserve, airplane and motorboat access, and snowmachine access for traditional activities, will continue. If Congress considers additional wilderness designations for Denali, the National Park Service would propose that accommodation be made as necessary for recreational snowmachine access along the winter season Corridor management areas.

The National Park Service is committed to providing visitors to the national park and preserve with reasonable access for wilderness recreational activities, traditional activities, and for other purposes as described in ANILCA and other laws. The National Park Service will generally allow independent, cross-country travel by any legal means, and will encourage access to the park and preserve by means of facilities (e.g., trails and marked routes) and services (e.g., commercial air taxi and guide services) as described under the Backcountry Facilities and Commercial Services headings in the Backcountry Management portion of this plan. If it becomes necessary to manage travel in any area to achieve desired future resource and social conditions for an area, to reduce visitor conflict, or to protect visitor safety, the National Park Service will use the least restrictive mechanism or "tool" necessary to accomplish the goal. The National Park Service need not wait for conditions to match or exceed standards before taking management action; an expectation that conditions would exceed standards is sufficient to mandate a response. Restrictions and closures will be accomplished consistent with the process outlined in 43 CFR 36.11 and/or other relevant regulations.

Table 4 lists the tools that may be used to manage access when necessary, arranged in rough order from the least restrictive to the most restrictive. The park superintendent is free to pick whichever tool is required as long as the "least restrictive" criterion is heeded. There is no implication that the tools must be tried in the listed order and a failure elicited before trying the next one.

1) Education	The National Park Service would provide printed material, public presentations, targeted presentations to user groups, and Internet-based programs, with the goal of actively involving visitors in helping the park achieve the standards for all management areas.
2) Increased enforcement of existing regulations	The National Park Service would prioritize enforcement of existing regulations to assist in achieving standards for management areas. For example, enforcement of the snowmachine speed limit or the sound level limits on motorized equipment could assist in achieving standards for sound quality.
3) Voluntary restrictions	The National Park Service would ask visitors to restrict their use voluntarily. Examples of such measures could include: voluntary registration; use of low-impact equipment; avoidance of certain areas of the park or preserve; or avoidance of areas during particular seasons or times of day. Voluntary registration would not require a permit and could be accomplished by trailhead register, phone or radio call-in, or the Internet.
4) Required registration	The National Park Service would require visitors to register. Visitors would be issued a permit that provides information about park rules and conditions for use necessary to protect park resources. Permit conditions could include minimum impact travel and camping requirements and resource protection requirements; however, a registration process would not limit the number of visitors or the type or amount of access. Registration is a means to gather information about visitor use levels and to ensure visitors receive necessary resource protection and safety information.

5) Technology requirements or other requirements governing means of access	To achieve management area standards, the National Park Service would place requirements on the means of access. For example, the NPS could require individuals to use technology that meets specific noise specifications if those individuals are accessing the park by snowmachine, motorboat, or airplane
6) Management of commercial activity	The National Park Service would adjust concession contracts and other commercial use permits to govern use levels or direct authorized commercial activity to locations, seasons, or times of day as necessary to achieve management area standards.
7) Regulate numbers of visitors	The National Park Service would establish quotas for visitor numbers in areas of the park additions and preserve when the volume of use is high enough that other mechanisms are unlikely to achieve standards. Visitors would be required to register and carry a permit, and the number of available permits would be limited. This is the mechanism presently used to manage overnight backcountry use in the Old Park and parts of the Kantishna Hills.
8) Temporal restrictions	The National Park Service would restrict access to particular times of day, days of the week, or other unit of time, or the duration of access could be limited.
9) Temporary and permanent closures	Using the appropriate authorities, the National Park Service would temporarily or permanently close areas of the park and preserve to all types of visitor use or to specific modes of access.
10) Management authorities of other agencies	The National Park Service would seek assistance from cooperating entities, such as the Federal Aviation Administration or State of Alaska, to apply regulatory or other measures to protect park resource values and achieve management area standards.

Cross-Country Travel

Except as otherwise specified in the management area descriptions and the Backcountry Facilities section, backcountry access and travel in Denali will continue without designated routes or constructed trails to allow for freedom to explore and to minimize signs of human presence. To prevent vegetation damage and social trail formation, the National Park Service will take the following actions:

1) Apply the Access Management tools specified for the situations described in Table 5.

2) Establish a social trails working group consisting of NPS staff, guided hiking concessioners, Murie Science and Learning Center staff and associated non-profit partners, and commercial services that provide access to the backcountry (by shuttle bus and air taxi). This group will address specific problem areas through coordinated action.

3) Develop Leave-No-Trace guidelines that are specific for Denali National Park and Preserve in consultation with the internal working group, NPS resource managers, and the Murie Science and Learning Center.

Table 5: Decision Guide for Addressing Social Trail Formation

Situation	Strategy	Application of Access Management Tools
No social trail formation; terrain allows dispersal or travel on durable surfaces (e.g., gravel river beds).	Keep use dispersed.	Provide Leave-No-Trace education for backcountry users to encourage continued dispersal and travel on durable surfaces.
No social trail formation at existing use levels, but terrain does not allow for dispersal or travel on durable surfaces.	Maintain use at level such that social trail formation does not begin.	Provide Leave-No-Trace education for backcountry users; manage guided groups to limit use; monitor level of use to detect increases; and limit number of visitors if necessary.
Social trails are present and are either stable or deteriorating, but additional dispersal is possible.	Encourage additional dispersal to lower levels of use on the social trail.	Provide Leave-No-Trace education for backcountry users and encourage voluntary dispersal coordinated through a social trails working group (see #2 below).
Social trails are present but stable at existing levels of use; little opportunity for dispersal.	Concentrate use on social trail and limit use sufficiently to prevent deterioration.	Educate visitors or restrict them to social trail, and limit numbers of visitors if necessary.
Social trails are present and are deteriorating; additional dispersal is not possible because of terrain.	Lower use levels until condition stabilizes.	Limit numbers of visitors or use temporary closures to restrict use.
In addition, the National Park Service may temporarily close some areas around social trails to allow rehabilitation even if conditions are stable.		

Aircraft

The National Park Service will advise all aircraft to maintain a minimum altitude above the ground of 2,000 feet whenever possible to avoid disruption of wildlife movement and subsistence and recreational activities. The suggested altitude minimums over any national park unit have been printed on the sectional aeronautical charts (scale 1:500,000) since the mid 1970s. This recommendation is especially important along the Denali park road corridor, since it is a focal point for wildlife tours and recreational activities. These flight advisories will be a stipulation in all special use permits and commercial use licenses subject to the requested use. It is recognized that these minimum altitude suggestions are advisory only (except for permits and licenses mentioned above), since the Federal Aviation Administration regulates air space, and that lower altitudes may be required due to weather conditions and emergencies.

- Aircraft Overflights Working Group

The National Park Service will establish an aircraft overflights working group, which will include scenic air tour operators, commercial airlines, general aviation organizations, and other concerned parties. This group will develop voluntary measures for assuring the safety of passengers, pilots, and mountaineers and for achieving desired future resource conditions at Denali.

- Fixed-Wing Aircraft

Fixed wing aircraft may be landed and operated on lands and waters within the park and preserve, except where such use is prohibited or otherwise restricted by the superintendent pursuant to 36 CFR 1.5 and 13.30 and 43 CFR 36.11(f) and (h). The use of aircraft for access to or from lands and waters within a national park or monument for purposes of taking fish or wildlife for subsistence uses therein is generally prohibited as set forth in 36 CFR 13.45 (see the discussion of "Subsistence Access"). Fixed wing aircraft land on gravel bars and tundra ridges. A sufficient number of these natural aircraft landing sites in the park accommodate public access. These natural landing sites do not require any forms of maintenance or improvement.

Currently, all federal lands within the park and preserve are open to authorized aircraft uses, and no changes are proposed at this time. In the future, if the need for closures or restrictions is identified, the National Park Service will propose them through the procedures outlined in 36 CFR 1.5 and 13.30 and 43 CFR 36.11(f) and (h).

- Landing Strips

The superintendent will inventory the landing strips within the unit and designate, after public notice and opportunity to comment, those strips where maintenance is necessary and appropriate for continued safe public use of the area. These designations are for maintenance purposes only and will be made pursuant to 36 CFR 1.7(b). Designated landing strips may be maintained as needed with nonmotorized hand tools by people using the areas. Maintenance or improvements to designated landing strips involving equipment other than nonmotorized hand tools must be accomplished under a permit from the superintendent. Outside of designated areas, no alteration of vegetation or terrain is authorized for landings and takeoffs except in emergency situations.

The McKinley Park airstrip will be closed to provide for potential expansion of the Alaska Railroad depot and to reduce resource impacts in the entrance area. NPS aircraft operations will be relocated to either the Healy or Denali private airstrips contingent upon availability of hangar space. Remaining flightseeing and air taxi services will also be relocated to the other airstrips. A helipad will be retained in the entrance area for medical evacuations. [31]

The construction of new landing strips on federal land may be allowed under one of the following circumstances:

1) when the need has been identified, assessed, and approved in an amendment to the general management plan or a new general management plan (or through an access and transportation plan if applicable)

2) when approved under title Xl of ANILCA, which provides a process for approval or disapproval of applications for the development of transportation and utility systems across conservation system units

3) for access to inholdings pursuant to 43 CFR 36.10

• Helicopter

The use of a helicopter in Denali National Park and Preserve, other than at designated landing areas or pursuant to the terms and conditions of a permit issued by the superintendent, is prohibited (36 CFR 13.13(f)). Landing areas for helicopters are designated pursuant to special regulations. At the present time, there are no designated landing areas for helicopters in the park and preserve.

Boat

Future studies will assess the feasibility and environmental impacts of improved boat access to the Chulitna River. One option to be studied is the possibility of a regularly scheduled boat shuttle that would provide access from a boat launch near the George Parks Highway to a trailhead in the national park on the Tokositna River. The option of connecting trails in the vicinity of Alder Point with a riverside trailhead will also be studied. [32]

The National Park Service will continue to work cooperatively with the State of Alaska Department of Natural Resources, the Department of Fish and Game, and the Department of Transportation and Public Facilities to determine the best location for improved access to the Nenana River and the appropriate size and type of facility to construct. [33]

Off-Road Vehicles

The recreational use of ORVs off established roads, parking areas, or designated routes is prohibited.[34] The random use of ORVs causes resource damage that is contrary to existing laws,

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[31] Closure of the McKinley Park airstrip was deferred for the foreseeable future in the 1999 *Environmental Assessment for Proposed Expansion of the Alaska Railroad Depot*.

[32] The 2006 *Final South Denali Implementation Plan and EIS* calls for new access from the Parks Highway to the Chulitna River downstream of the mouth of Troublesome Creek for rafts, kayaks, and other small non-motorized watercraft. It also calls for determining the feasibility of a docking facility on the west side of the Chulitna River near milepost 121.5 of the Parks Highway.

[33] As part of the Nenana Canyon Safety Improvement Project, the Alaska Department of Transportation and Public Facilities improved river access from the Kingfisher Creek pad in Nenana Canyon.

[34] The use of ORV's for subsistence is discussed in footnotes in the Subsistence Management section below.

executive orders, regulations, and policy. Section 1110(a) of ANILCA provides for the use of snowmachines, but not for ORVs other than snowmachines. Consequently, the recreational use of other ORVs is subject to the provisions of Executive Order 11644, ''Use of Off Road Vehicles on the Public Lands.'' The executive order requires the designation of specific areas for ORV use in national park system areas and a determination that ORV use in these areas will not adversely affect the natural, aesthetic, or scenic values. The executive order specifically prohibits ORV routes in designated wilderness areas.

The research in Wrangell St. Elias National Park and Preserve was designed to measure the effects of various types of ATVs in tussock shrub terrain and document the amount of damage that occurs to the vegetation and terrain as the number of vehicle passes increases. The findings of this study are that the use of ATVs off established roads results in substantial resource damage even at the lowest traffic levels (10 passes) and that resource damage increases with additional use.

The use of ORVs on rights of way and easements established under various authorities, including RS 2477 and section 17(b) of ANCSA, will be determined as their validity is determined (e.g., RS 2477 rights of way) or as they come under management authority of the National Park Service (e.g., ANCSA 17(b) easements). Whether ORV use will be allowed on a particular right of way or easement will depend on the specific terms and conditions of the right of way or easement, the history of use, and other environmental factors.

All ORV use will be subject to applicable state and federal laws and to permits and restrictions necessary to prevent resource damage. These restrictions may limit the size and type of vehicle, vehicle weight, season of use, number of trips, and other conditions necessary to protect park resources and values.

Access to Inholdings

Access is guaranteed to nonfederal land, subsurface rights, and valid mining claims, but any such access is subject to reasonable regulations to protect the values of the public lands that are crossed (ANILCA, sections 1110 and 1111). Existing regulations (43 CFR 36.10) govern the access to inholdings. The use of ORVs for access to inholdings may be allowed under 43 CFR 36.10 by the superintendent on a case by case basis on designated routes. In determining what routes and restrictions should apply to the use of ORVs for access to inholdings, the superintendent will consider the potential for resource damage and user conflicts and the availability of alternative routes and methods of transportation. The use of ORVs for access to inholdings will only be allowed upon a finding that other customary and traditional methods of access will not provide adequate and feasible access. [35]

RS2477

Revised Statute 2477 (formally codified at 43 USC 932, enacted in 1866) provides that "the right of way for the construction of highways over public lands, not reserved for public uses, is hereby granted." The statute was repealed by PL 94 579 as of October 21, 1976, subject to valid existing claims.

The 1980 additions to Denali National Park and Preserve are subject to valid existing rights, including rights of way established under RS 2477. The validity of these rights of way will be

[35] A publication by the NPS Alaska Region office entitled *An Interim User's Guide to Accessing Inholdings in National Park System Units in Alaska* (July, 2007) is now utilized as guidance for Denali and other Alaska national parks.

determined on a case by case basis. The rights of way that the state contends may be valid under RS 2477 are listed in Appendix D. A map of these possible RS 2477 rights of way has been provided by the state (see Maps 22A, B, and C). The list and map are not necessarily all inclusive. Private parties of the state of Alaska may identify and seek recognition of additional RS 2477 rights of way within the additions to Denali National Park and Preserve. Supporting material regarding potential rights of way identified by the state may be obtained through the Alaska Department of Transportation and Public Facilities or the Alaska Department of Natural Resources.

Identification of potential rights of way in Appendix D does not establish the validity of these RS 2477 rights of way and does not provide the public the right to travel over them (although use of these routes may be allowed under other authorities discussed elsewhere in the access section). As discussed later in this section, the use of off road vehicles in locations other than established roads or designated routes in units of the national park system is prohibited (E.O. 11644 and 11989 and 43 CFR 36.11(g)). Identification of possible rights of way does not constitute the designation of routes for off road vehicle use.

17(b) easements

Campsite and linear access easements may be reserved on native corporation lands that are within or adjoin the park or preserve, as authorized by section 17(b) of ANCSA. The National Park Service will be responsible for the management of these public access easements inside the park unit and for those assigned to NPS outside of the unit. Pursuant to part 601, chapter 4.2 of the Department of the Interior "Departmental Manual" (601 DM 4.2), where these easements access or are part of the access to a conservation system unit, the easements shall become part of that unit and be administered accordingly. The purpose of these easements is to provide access from public lands across these private lands to other public lands. The routes and locations of these easements are identified on maps contained in the conveyance documents. The conveyance documents also specify the terms and conditions of use, including periods and methods of public access. [36]

The National Park Service will work cooperatively with the affected native corporation and other interested parties, including the state of Alaska, to develop a management strategy for the easements. Management of these easements will be in accord with the specific terms and conditions of the individual easements and applicable park regulations (pursuant to 43 CFR 2650.4 7(d)(4) and 36 CFR 1.2). As the easements are reserved and the National Park Service assumes management responsibilities for them, the locations, mileages, and acreages will be compiled and management strategies will be formulated. This information will be maintained at park headquarters. Existing easements are depicted on Maps 13 and 18.

As authorized in 601 DM 4.3G, as easement may be relocated to rectify a usability problem or to accommodate the underlying landowner's development of the lands if both the National Park Service and the landowner agree to the relocation. Easements may also be exchanged if an acceptable alternate easement or benefit is offered by the underlying landowner and the exchange would be in the public interest. An easement may be relinquished to the underlying landowner if termination of the easement is required by law. The National Park Service may also propose to place additional restrictions (to those authorized in the conveyance docu-

[36]Presently only two 17(b) easements have been assigned to Denali. One is EIN 7a C5, DI, L from Cantwell to the park boundary across Ahtna, Inc., land as described in the text. The other is EIN 4 D which is a 1-acre site easement on a Doyon, Ltd., inholding that is depicted on Map 18. The uses allowed on a site easement are: vehicle parking (e.g., aircraft, boats, all-terrain vehicles, snowmobiles, cars, and trucks), temporary camping, and loading or unloading. Temporary camping, loading, or unloading is limited to 24 hours.

ment) on the use of an easement if existing uses are in conflict with the purposes of the unit. In all cases where a change is proposed in authorized uses or location from the original conveyance, the National Park Service will provide adequate public notice and opportunity to participate and comment to the affected native corporation and other interested parties, including the state of Alaska. Any National Park Service proposals for changing the terms and conditions of 17(b) easements will include justification for the proposed change, an evaluation of alternatives considered, if any, and an evaluation of potential impacts of the proposed action.

The National Park Service will initiate collaborative action with concerned and affected parties in the Cantwell area to acquire an easement over private lands to gain public access to the existing 17(b) easement (EIN 7a C5, DI, L) that provides a route across Ahtna, Inc. land from Cantwell to the park boundary near Windy Creek. The existing easement is 25 feet wide and allows travel by foot, dogsleds, animals, snowmachines, two- and three-wheeled vehicles, and small all-terrain vehicles. See Map 13.

Public Use Easements (Native Allotment Act)
The National Park Service will request the reservation of public (nonexclusive) use easements from the BLM on lands being conveyed under the Native Allotment Act of 1906, where important public use trails cross the lands being conveyed. The public use easements will ensure continued public access to public lands and resources in the unit.

North Access

The potential for upgrading the Stampede Trail or other northern access routes is not addressed in detail in this plan. The National Park Service continues to disagree with the state of Alaska about the economic justification for building another northern access road. The current level of mining activity and the amount of gold recovered do not justify a road for mining access. Estimates of the cost of constructing such a road vary between $1 million and $2 million per mile. [37] State estimates range from $85 million to $125 million, depending on the route

[37]At the direction of Congress, in 1997 the National Park Service completed a *North Access Feasibility Study* (NPS 1997c) which included estimates for construction for either a road and a railroad from the Parks Highway near Healy to the Wonder Lake/ Kantishna area. Construction costs for gravel and paved road alternatives, estimating the road at 80 miles long, were estimated at $87,400,000 ($1,092,500 per mile) and $100,050,000 ($1,250,625 per mile), respectively (1997 dollars). The Alaska Department of Transportation and Public Facilities estimate that at the completion of NEPA compliance, route planning, survey, and design expenditures would represent an additional 9% of the construction amount. Cost projections for constructing a railroad, estimating an 86- to 95-mile route, ranged from $136,125,000 ($1,512,500 per mile) to $213,603,360 ($2,483,760 per mile) (1997 dollars). The Alaska Railroad Corporation and others indicated that route planning, survey, and design costs would be an additional 15% of the construction amount.

In 2006, the Alaska Department of Transportation and Public Facilities completed the *North Denali Access Route Reconnaissance Study* (ADOT 2006), and provided new estimates for construction of road, railroad, and trail along four potential north access routes. The cost projections and cost-per-mile calculations appear in the following table. (All cost figures are in millions of dollars.)

Mode	**Route Miles**	Stampede 81		Rex 96		Rock Creek-South 81		Rock Creek-North 93	
		Cost	Cost/Mile	Cost	Cost/Mile	Cost	Cost/Mile	Cost	Cost/Mile
Road	min	98.7	1.22	110.1	1.15	102.0	1.26	115.7	1.24
	max	211.4	2.61	236.0	2.46	218.5	2.70	247.9	2.67
Railroad	min	213.5	2.64	240.0	2.50	213.7	2.64	242.1	2.60
	max	457.4	5.65	514.4	5.36	458.0	5.65	518.8	5.58
Trail	min	27.3	0.34	29.3	0.31	27.7	0.34	32.7	0.35
	max	58.5	0.72	62.8	0.65	59.3	0.73	70.1	0.75

chosen. A northern access route through the park would have severe environmental impacts. The Senate report to accompany HR 39 (ANILCA) says that "the prime resource for which the north addition is established is the critical range necessary to support populations of moose, wolf, and caribou as part of an integral ecosystem. Public enjoyment of these outstanding wildlife values would thus continue to be assured." [38] The Stampede Trail crosses the denning areas of the Toklat and Savage wolf packs, the winter range of the Denali caribou herd, the major movement corridor along the Toklat River for both wolves and caribou, and many miles of pristine country. The lands are suitable for wilderness designation. The benefits to visitors of having expanded services in the northern portion of the park would not justify the ecological damage. In fact, not all visitors would benefit from the expanded viewing opportunities. Rerouting the wildlife tour to follow a loop road configuration would extend the length of the tour by at least four hours, requiring visitors to ride a bus for at least 12 hours or to spend a night in the park. Currently, the average age of visitors on the wildlife tour is 58 years, and many prefer a tour less than eight hours long.

The need for a new mining access road would be reassessed if Congress opened the area to new mining entry and the demand for such access increased dramatically. Alternatives related to new mining entry in this area were evaluated in the *Final Environmental Impact Statement, Kantishna Hills/Dunkle Mine Study* (DOI 1984). Congress has not acted on this study. If warranted in the future, a northern access route could be applied for under the provisions of title XI of ANILCA. [39]

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[38] USGPO, (Nov. 14) 1979 Report of the Committee on Energy and Natural Resources, United States Senate, together with Additional Views to accompany H.R. 39. 96th Congress, 1st session, Report No. 96-413, p.166

[39] The 1990 EIS for the *Cumulative Impacts of Mining* concluded that the NPS should acquire mining claims in the Kantishna area and the agency has since pursued that strategy. Additional examination of a northern route to provide access for national park visitors has included the above-referenced 1997 North Access Feasibility Study and the 2004 *North Access Visitor Facilities Study*, both completed by the NPS at Congressional direction, and the 2006 *North Denali Access Reconnaissance Study* completed by the State of Alaska Department of Transportation and Public Facilities with federal and state funds.

Visitor Facilities and Services

Frontcountry Development: General Planning Concepts and Visitor Use

Continue cooperative regional planning with state of Alaska agencies, the Denali Borough, Native corporations and groups, the Denali Foundation, Alaska Natural History Association, and the public.

Meet the guidelines in ANILCA Title XIII, sections 1306 and 1307 regarding working with Native corporations to implement proposals for administrative and visitor facilities and services.

The emphasis will be to provide visitor facilities and services in the frontcountry to meet a wide range of visitor needs and interests. Frontcountry developments will be limited to actions in which the National Park Service has traditionally specialized, such as interpretive centers, environmental education opportunities, trails, resource protection programs, and campgrounds. Improved resource protection will be integrated with development actions throughout the frontcountry. The Park Service will encourage the private sector to develop visitor service facilities (accommodations, food service, and other commercial services) and housing and administrative facilities that the Park Service could lease or purchase outside the park.

Continue to emphasize access to a high quality wilderness experience for visitors of all ages and abilities.

Under the proposed plan, facilities, programs, and services will be added to enhance the visitor experience throughout the park. The concept is to significantly expand day use and camping opportunities in the frontcountry area along with improved resource protection.

Upon arrival at the park, visitors to Denali will encounter an entrance station, creating a sense that they are entering a special place. NPS personnel at the station will greet visitors, collect entrance fees, and provide basic directional information.

Visitors will discover a variety of facilities and services that meet the needs of varied audiences seeking different levels of experience with the park's resources. Existing visitor use opportunities will continue; but additional facilities, programs, and services will be available throughout the entrance area and road corridor. Orientation information at the proposed visitor services building and at the railroad depot will locate park facilities and services and indicate where to obtain additional information. Interpretive and environmental education opportunities will be enhanced by providing facilities offering in-depth interpretation of the park's themes for all visitors.

Interpretive program opportunities in the frontcountry will be expanded. New interpretive programs will include the Teklanika Archeological District, traditional use of the region by Alaska Natives, the Headquarters Historic District, and the Dry Creek Archeological District. Expanded interpretive opportunities including living history, a variety of exhibits, and interpretive programs involving sled dogs will be available at the Savage cabin. Formal sled dog demonstrations will still be provided at headquarters, with a rerouted trail and better viewing for visitors. Additional interpretive services dealing with regional history will be available in both the Headquarters and Kantishna Historic Districts.

New public transportation from the entrance area to the proposed Savage River rest stop and trailheads will encourage visitors to leave their cars and to explore those parts of the park.

Opportunities for overnight lodging in the entrance area will be eliminated by removal of the Denali Park Hotel and will be available outside the park entrance. The National Park Service will encourage the establishment of small-scale, lower-cost lodging such as a hostel in the Kantishna area.

Additional opportunities for camping in the frontcountry will be provided. The Park Service proposes traditional tent camping, walk in, and backpacker experiences that it has generally provided and that are usually undersupplied by the private sector. Some additional camper services will also be provided in the entrance area, including groceries, fast food/deli service, showers, and laundry. Additional services will be provided by the private sector outside the park.

The Denali visitor transportation system shuttle, Denali natural history tour, and tundra wildlife tour will continue as the primary visitor access modes for most visitors to the park interior. Improvements to rest areas along the park road and expanded interpretive facilities and services, including a new Eielson Visitor Center, will significantly enhance the tours into the interior of the park.

Visitor opportunities along the first 15 miles of the park road will be enhanced. Trail construction, wider road shoulders, new picnic areas, and improvements to rest areas will provide additional opportunities for leisurely day use experiences viewing animals and landscapes.

Hiking opportunities will be increased and enhanced through more and better defined trails in the entrance area and at certain locations along the park road corridor. Visitors could escape their ties to mechanical transportation systems for brief encounters with the natural and cultural resources along many short trails, especially in the concentrated visitor use areas between the Nenana and Savage Rivers. Conditions and accessibility of existing trails will be upgraded and maintained. These trails will feature both natural and cultural resources along with splendid mountain scenery.

1986 GENERAL MANAGEMENT PLAN DEVELOPMENT PROPOSALS

Park Entrance – Construct new visitor access center and shuttle bus staging area; construct employee housing; improve information/orientation services and exhibits; expand hotel parking [40]

Park Headquarters/C-Camp – Renovate and expand the permanent and seasonal housing; develop seasonal housing and trailer sites; construct bunkhouse; consolidate maintenance/office facilities; construct administration building annex; separate maintenance/administrative functions from housing [41]

Savage River Campground – Rehabilitate sites; add four handicap-accessible campsites; construct bus stop shelter with orientation exhibits [42]

Polychrome Pass Wayside – Upgrade with comfort station and interpretive exhibits/shelter; delineate parking and paths [43]

Toklat – Improve and expand employee housing; separate maintenance and housing; construct maintenance/storage shop, bunkhouse, water/sewer systems [44]

Toklat Ranger Station – Rehabilitate structure; build adequate winter storage/emergency supplies cache [45]

Eielson Visitor Center – Short-term: pave, landscape; long-term: design and relocate existing facility or enlarge and renovate existing structure [46]

Wonder Lake Campground – Relocate campground in same vicinity and expand to 30 sites; reduce roads and parking areas; restore existing campground to natural conditions [47]

Wonder Lake Ranger Station – Provide employee/bus driver residences, transient bunkhouse, grounds rehabilitation; replace ranger station [48]

Kantishna Area – Encourage private owners to preserve historic artifacts; prevent additional privately owned lodging by acquiring surface estates; develop NPS maintenance facility [49]

Parkwide – Restore park road to original design standard; retain gravel surface; correct drainage; repair/replace bridges. Upgrade water/sewage treatment systems to current standards. [50]

Retain public shuttle bus system; continue wildlife tours; adjust shuttle schedule to improve service (provide flexible service); provide comfortable shuttle buses if possible; coordinate schedules with interpretive programs – more eastbound morning buses and later buses partway into park and return, special buses for discovery hikes; utilize buses for employee and inholder visitor access.

Improve orientation/interpretive exhibits at entry points, campgrounds, waysides; generally improve sign program, install road signs to key with text in brochures/guides; install waysides at George Parks Highway, depot, Morino, kennel, first view of Mount McKinley, Savage River campground and bus shelter, Teklanika, Polychrome Pass, Eielson, and Wonder Lake [51]

Provide food storage caches/cooking shelters at tent campgrounds, as needed [52]

Provide short, formal trails and "harden" surfaces where resources are being damaged or where extensive informal trails are developing [53]

Continue monitoring the effects of traffic and visitor activities on wildlife [54]

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[40] The new Visitor Access Center (now Wilderness Access Center opened in 1990. Parking and orientation information was re-addressed during the implementation of the 1997 *Entrance Area and Road Corridor DCP.*

[41] These actions are ongoing. The bunkhouse was created within the C-Camp Rec Hall. The administrative annex appears as a 5,000 square-foot building behind the park headquarters building in the 1997 *Entrance Area and Road Corridor DCP* but has not been constructed. Maintenance and EMS functions are being consolidated in the C-Camp area.

[42] These actions have been completed.

[43] These actions have been completed.

[44] These actions have been completed.

[45] These actions have been completed.

[46] The 1997 Entrance Area and Road Corridor DCP reaffirmed the decision to replace Eielson Visitor Center. The building was demolished at the end of the 2005 season and the new visitor center facility will open in 2008.

South Denali Development: General Vision and Goals

The south slope of the McKinley massif is conspicuously different from the sheer north wall and the valley traversed by the existing park road. The south slope receives a greater annual precipitation and spans a more gradual elevation rise from the adjacent lowlands and, as a result, contains a much more extended glacial system and a broader cross section of dramatically sculptured landscapes. Some of the south side valley glaciers the Yentna, Kahiltna, Tokositna, Ruth, and Eldridge – are among the longest in the world, extending up to 45 miles from source to terminus. The enlarged national park encompasses these glaciers and the lower reaches of moraines and tundra. Adjacent Denali State Park, established in 1970, now adjoins the expanded national park, creating opportunities for cooperative management for visitor use.

Compared to the north side, with its sensitive wildlife values and fragile tundra, the glaciated landscape on the south side offers more varied opportunities for access and recreational use. Potential activities in the state and national parks range from viewing the Alaska Range from the George Parks Highway to the ultimate in American mountaineering challenges -- reaching the summit of Mount McKinley. Small aircraft can fly up and land on the numerous glaciers. Hiking opportunities of varying degrees of difficulty abound in the front range mountains (particularly the Tokoshas), in the rolling tundra highlands of the Peters and Dutch Hills, and on Curry Ridge in the state park, where a 40 mile trail loop already exists. River floating possibilities exist on the Tokositna and Chulitna rivers. The broad, marshy Chulitna and Tokositna river valleys, dotted with lakes and ponds, provide good opportunities for viewing wildlife, notably moose and trumpeter swans. The views to the Tokosha Mountains are superlative. In the winter and spring when the marshy terrain is frozen, these valleys become vast cross country skiing and dogsledding grounds. Several residents of the Tokosha community currently operate cross country ski touring businesses that utilize trails and cabins in the area.

Many of the activities mentioned already occur on a modest level, but the development of access and support services will make these activities available to a wider cross section of visitors. This provision of mountain oriented recreational opportunities was legislated in the park's expansion act.

Foremost in facilitating visitor use of the south side – especially for national and international visitors – will be the development of a full range of lodging and other visitor services and the provision of access to major features, viewpoints, and activity areas. These major facilities on the south side of Denali should be visually linked with the Ruth Glacier because of the Ruth

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[47] The campground expansion was completed in 1989 following the 1988 Wonder Lake Campground Rehabilitation EA (NPS 1988b).

[48] The Wonder Lake Ranger Station was rehabilitated rather than replaced. The other functions have been located elsewhere.

[49] These actions have been accomplished except for the NPS maintenance facility, which remains a goal.

[50] Park road maintenance standards were addressed again in Appendix C of the 1997 Entrance Area and Road Corridor DCP, which is included as Appendix C in this document and is now the current guidance. Work has occurred to bring sewage treatment systems up to current standards at Wonder Lake, Toklat, Headquarters, Eielson, and C-Camp. The sewage lagoon at the entrance area remains out of compliance but commitments are in place to remedy that problem and issues with pumped toilet systems along the park road.

[51] These actions have been accomplished. The Resource Education Plan will readdress waysides.

[52] This action has been completed.

[53] This action has been completed other than where indicated under the "Trails" section below.

[54] Periodic studies continue, including a 1995-1997 study (Burson et al. 2000). A new 3-year study was initiated in 2006.

Glacier's wealth of spectacular features capable of accommodating visitor use. With the Sheldon Amphitheater, Great Gorge, Alder Point, Alder Lake, and the Moose's Tooth and other granitic monoliths, the Ruth Glacier is superior to neighboring glaciers for the purposes of providing a dramatic visitor experience.

The most striking vantage point for viewing Mount McKinley through the corridor opened by the Ruth Glacier occurs on the south end of Curry Ridge. Curry Ridge is a tundra plateau that parallels the Alaska Range for some 30 miles. From this elevated vantage point, 1,000 feet above the highway, the full sweep of the Alaska Range is revealed across the forested Chulitna River valley. This dramatic viewpoint is the proposed site for the visitor service and activity center. This site also offers the advantage of being easily accessible from the George Parks Highway and the Alaska Railroad. Alaskan residents and tourists could reach the area in a 3 hour drive from Anchorage or a 5 hour drive from Fairbanks, or if they wished to travel by train, they could arrange a round trip in a minimum of two days, stopping at Talkeetna and using connecting surface transportation to reach Curry Ridge.

The project to develop the south side of Denali will be planned and developed cooperatively by the National Park Service and state of Alaska, with major involvement from the private sector. The Curry Ridge site is part of Denali State Park, which is currently managed as a primitive area with a single campground and a trail system. Thus, the development of a visitor activity center as envisioned in this plan will constitute a major change in the management of Denali State Park as well as a new focus for use of Denali National Park. The Alaska Division of Parks and Outdoor Recreation will serve as project lead and make final decisions regarding the use of state lands.[55] The National Park Service will work with the state in the joint development and operation of a visitor service and activity center that will be a point of orientation for public use and enjoyment of the nearby national park lands as well as the state park lands. Private sector participation will be essential for the development of commercial components of the south side development, primarily the lodge and related facilities and utilities.

The National Park Service and the state of Alaska have signed a memorandum of understanding that establishes what processes will be followed for cooperative planning for south side development.[56] The two agencies have jointly published a brochure describing the development concept for public review and comment and held a series of public workshops. If state and federal study funds are appropriated, the National Park Service and the state of Alaska intend to prepare an environmental impact statement analyzing site specific alternatives for a visitor activity and service center on Curry Ridge. The environmental impact statement will be prepared in consultation with a full range of government agencies and will provide for extensive public comment and review in accordance with the National Environmental Policy Act. That study will include detailed information about environmental factors, marketing projections, and design and construction feasibility. [57]

The particular attributes of different areas on the south side of Denali can be used to advantage to create a great variety of outstanding experiences for visitors to choose from. For the foreseeable future, aircraft will be the primary means of access to features within Denali National

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[55] The National Park Service and the State of Alaska Division of Parks and Outdoor Recreation are now pursuing cooperative management of the described visitor activity center with the completion of the 2006 *South Side Denali Implementation Plan*. The Division of Parks and Outdoor Recreation is still the final decision-maker regarding the use of state lands.

[56] Additional agreements have been signed since 1986. The Matanuska-Susitna Borough and two state agencies – the Department of Natural Resources (Division of Parks and Outdoor Recreation) and the Department of Transportation and Public Facilities – have become explicit partners in south Denali implementation.

Park. The primary base of aircraft operations into the park from the south side will continue to be the airport at Talkeetna, where several air taxi services offer "flightseeing" and glacier landing trips. Most visitors' destinations will be in the vicinity of the Ruth Glacier, which could be reached in a matter of minutes from Talkeetna. Aircraft use will be managed through commercial use licenses to fit the capacity of popular fly in sites and to avoid disturbing the solitude of more remote park destinations and private lands.

As another alternative to the more intensive recreational use of the activity center in Denali State Park, hiking and primitive camping opportunities will be available in the areas of the Peters Hills and the Tokositna Glacier that are accessible by existing primitive roads. The Peters Hills and the Tokositna Glacier will appeal to people looking for an experience away from the highway corridor.

Since the George Parks Highway is open year round, winter and spring activities, such as cross country skiing and dogsled trips, will also be possible. When the streams are frozen, numerous opportunities will exist to explore the Chulitna and Tokositna valleys. Aircraft will support cross country skiing trips into the mountain valleys and passes and onto the glaciers.

The south side plan proposes joint government and private commercial development of federal and state park lands, and it will require extensive cooperation between the National Park Service, the state of Alaska, and private enterprise. [58] As stated previously, a separate development concept plan and environmental impact statement will be prepared for the south side of Denali. Specific development proposals will be preceded by marketing studies, site analyses, and impact analyses. [59]

Development Considerations

The proposals for the south side of Denali are conceptual. More detailed plans and designs will be prepared for specific projects following the approval of this plan. The construction of facilities will be preceded by site specific feasibility and environmental analyses and marketing studies. Certain development considerations related to engineering feasibility, aesthetic values, and environmental concerns are summarized below as a guide for more detailed planning for the south side.

The location and design of facilities will require on site evaluation of local soil conditions. Active alluvial areas and swampy zones will be avoided because of low bearing strength and the potential for swelling and movement. Bedrock, glacial drift zones, and morainal deposits are generally suitable for roads and building foundations. The Talkeetna Mutnala soils within the area contain a glacial till with high bearing strength and thus good capacity for supporting building and road foundations. This till is overlain by silty materials which occupy the upper 15 to 30 inches.

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[57] This document was completed in 1997 as the *South Side Denali Development Concept Plan*, which was incorporated into the GMP as an amendment with its details provided below. Additional refinements and detail were provided in the 2006 South Denali Implementation Plan and EIS.

[58] The 1997 *South Side Denali Development Concept Plan* and the 2006 South Denali Implementation Plan and EIS expanded the list of important partners to include the Matanuska-Susitna Borough, with responsibility for local land use planning and trails planning, and the affected local communities including Trapper Creek and Talkeetna.

[59] The 1997 *South Side Denali Development Concept Plan* and the 2006 *South Denali Implementation Plan and EIS* were the first documents to implement these requirements.

Sand and gravel for road fill will be obtained from alluvial deposits that lie along the creeks and established borrow sites. The selective use of these materials will be based not only on feasibility, material quality, and haul distances, but also on aesthetic impacts and effects upon fish and wildlife within the local area.

Construction in areas of discontinuous permafrost might require the use of special materials for foundations (gravel pads, blocks, pilings, or timbers that could be jacked up or down). Wherever feasible, more suitable sites will be selected.

The locations, sizes, and configurations of proposed facilities will take into consideration the potentials for landslides, rockslides, avalanches, and earthquakes.

Environmental studies will precede any construction activity for the purpose of identifying and avoiding prime wildlife habitats and migration routes. These generally include the river valleys associated with the south flowing glaciers and the extensive bog and pond areas south of the range. Low lying areas where willow is abundant are important moose winter range. Wet meadows are used by trumpeter swans. Creeks and ponds are prime use areas for beaver. Bear denning occurs on well drained areas near brushline, which also serve as moose summer range.

Floodplains and wetlands will be avoided to the greatest extent practical in the selection of sites appropriate for visitor use and development of facilities. Development will be guided by the regulations for complying with Executive Order 11988, "Floodplain Management, " and Executive Order 11990, "Protection of Wetlands" (45 FR 35916 and 47 FR 36718).

Since the south side offers a potential to extend the season of use beyond the summer season, energy conservation features will be incorporated into facility design. Climate, slope, and aspect are important design factors.

South Denali Development Concept Plan

The emphasis of the *South Side Denali Development Concept Plan* is on providing visitor facilities and services throughout the south side to meet a wide range of needs and interests of the region's diverse user groups. Visitor facilities will be developed in the Tokositna area near the end of the Petersville Road and along the George Parks Highway in Denali State Park, at Chelatna Lake, and in the Dunkle Hills area. [60]

In the Tokositna area visitors could obtain area-specific park orientation and interpretive information at a visitor center, explore the area and access Denali National Park and Preserve via hiking/interpretive trails, or make use of a campsite or public use cabin. This component of the plan will provide the visitor with a sense of departing the main highway and its faster pace and arriving at a wilder, slower-paced locale. Facilities and road improvements will be designed with this purpose in mind. Development at Tokositna will provide access to the superb views in the area and provide opportunities for the visitor to immerse oneself in the landscape and be surrounded by the Alaska Range. Facilities will be designed to encourage visitors to leave their vehicles and experience the adjacent tundra/alpine landscape in both the state and national park. Tokositna will also serve as a jumping-off point for longer hiking or backcountry trips in the surrounding wild lands.

Other areas will also be developed to allow visitors to more fully experience the south side. An interpretive center, a campground, interpretive roadside exhibits, and trails will be available and accessible in Denali State Park via the George Parks Highway. These facilities will be provided for visitors seeking convenient information and orientation to the area, for those wishing to use that area of the state park for recreation, and for those users who do not have the time, interest, or resources for an off-the-main-highway experience such as at Tokositna.

Additionally, a hiking trail, a few campsites, and some public use cabins will be available primarily for fly-in visitors at Chelatna Lake. A trailhead will also be developed in the Dunkle Hills.

Viewed as a whole, these south side facilities and services should benefit all visitors, including Alaska residents, independent travelers, and package tour travelers.

What follows are conceptual descriptions of the proposed visitor facilities. More detailed information and analysis of the exact site location, design, capacity, and function of each component will be covered in associated partnership plans, such as the revision of the *Denali State Park Master Plan* that is underway by the state of Alaska, or in other subsequent, site-specific planning, environmental analyses, and public involvement. [61]

The state will manage state-owned lands along the Petersville Road to protect scenic, wildlife, mineral, recreation, and other resource values.

Land management plans and controls will have to be in effect and resource studies completed before significant development could occur under any of the action alternatives. The implementation partnership team, in consultation with the public, will determine when such controls and studies were sufficient to begin development.

Except in specific development areas highlighted in this plan, the wild character of Denali State Park and Denali National Park and Preserve should be protected. New facilities and uses should be designed and located to minimize impacts on existing uses (e.g., mining, subsistence, wildland recreation).

Interpretive Facilities – Major Visitor Centers

Denali Visitor Center

As mentioned above, the existing visitor access center will be expanded and adaptively used as an interpretive and discovery center (14,000 square feet total). This building will include a museum, a theater, an expanded ANHA sales outlet, and interpretation of traditional uses by Alaska Native people. The discovery center portion of the building will include "hands on" and interactive exhibits to provide an in-depth orientation to the resources of Denali. The National Park Service will continue working with the Alaska Natural History Association, the Denali Foundation, and the Denali Elderhostel in developing this facility. [62]

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[60] See maps 14 and 16.

[61] The 2006 *South Denali Implementation Plan and EIS* and coordinated Denali State Park Master Plan Amendment were the first of these documents. Together, they provided implementation detail and analysis for the Parks Highway interpretive facility, Petersville Road improvements, trails, campgrounds, and boat access to the Chulitna River along with measures to protect scenic qualities of the Parks Highway and Petersville Road.

[62] The 2001 *Environmental Assessment for Construction of New Visitor Facilities in the Entrance Area of Denali National Park* revised the GMP guidance and provided for a new Visitor Center campus on the site of the former Denali Park Hotel, separating the interpretive center from the access center. The access center retained its function as a ticketing/permitting/bus boarding facility and a new interpretive center was constructed at the hotel site.

Murie Science and Learning Center
Some of the existing buildings in the hotel area, including the auditorium, will be adaptively used for an environmental education and science center after the hotel closes no later than 2002. Overnight accommodations for up to 50 people will be provided in former concessioner housing. The environmental education and science center will be available for extended interpretive and educational programs ranging from a few hours to a week or more. Programs for local and regional school groups will be developed, and science programs for adults will be available as well. In addition to the auditorium, housing, and office space, the center will ultimately include classrooms for activities during inclement weather, a library, a science laboratory, a storage area and workroom, and an ANHA sales outlet for selected background books and other educational materials. An arrangement could be made with the concessioner to provide food service in the existing employee dining area. [63]

Eielson Visitor Center
Eielson Visitor Center will be replaced with a facility of appropriate size and function and will incorporate alternative energy systems such as photovoltaic to supplement or replace the diesel generator. [64]

South Denali
The plan proposes two visitor centers, one in the Tokositna area and one near Byers Lake. These visitor centers could be built as a joint effort between the state, federal government, boroughs, or Native corporations, or as a public-private partnership. In either case, construction of the facilities will be contingent on an agreement between the National Park Service and the Alaska Division of Parks and Outdoor Recreation regarding cost sharing, operation and maintenance, exact location, and site and facility design as well as appropriation of sufficient funding. The public will have opportunities to review and comment on the specific location of the centers (and associated facilities such as trails and picnic areas), and site-specific and architectural designs, during future environmental analyses.

Tokositna Visitor Center and Associated Petersville Road Improvements

A visitor center (up to 5,000 square feet) will be constructed near the Tokositna overlook, an alpine saddle above the Tokositna River and Glacier in the Ramsdyke Creek and Long Point area of Denali State Park. The Tokositna visitor center will serve the needs of both Denali State Park and Denali National Park and Preserve, and will be expected to receive approximately 207,000 visitors per year by the year 2012. As stated above, this center will be constructed in phases based on funding availability and coordinated with the phasing scenario developed for the Petersville Road improvements/upgrade (see details below on the road).

The visitor center will include space to provide information and orientation to the Tokositna area, an indoor exhibit room, an indoor and outdoor viewing area, a simple food service area that will not require kitchen facilities, a small interpretation-oriented sales shop, and public restrooms. Administrative space for a combined state and NPS staff will also be included,

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[63] Further investigation and planning demonstrated that the park hotel buildings could not be reused for the stated purposes, but most were moved and reused outside of the park. The Murie Science and Learning Center has been partially developed with new construction. The science/laboratory and overnight housing were not funded or constructed as of the publication date of this document. A new food service facility was developed to jointly provide concessioner employee dining as well as MSLC dining.

[64] The 2004 *Environmental Assessment for Construction of a New Eielson Visitor Center and Permanent Toklat Rest Stop* provided for implementation of this action, to be completed by 2008.

along with maintenance and storage space. Covered and uncovered, open-air picnic facilities with a capacity for about 50 people will be provided in the vicinity of the visitor center. A helicopter pad for use in emergency situations will also be sited nearby. Parking will be provided for up to 45 cars and 30 buses or recreational vehicles (RVs).

The center will be intended primarily for summer use, but will be designed and built for year-round capability. Winter maintenance of the Petersville Road will not extend beyond the Forks Roadhouse at about mile 19, and winter access will be by snowmachine or skis. Winterized accommodations for a caretaker and up to three park rangers (for a staffing coverage of two rangers per day, seven days per week) will be provided to allow for limited visitor services in the winter and to give rangers a base for year-round patrols. Decisions on the exact location of the employee housing (e.g., whether part of the visitor center or separate from it) will be made during the design phase. Additional housing for seasonal employees will be a combination of cabins or bunkhouses in the vicinity of the Tokositna facilities and housing provided in nearby local communities from which employees would commute. For purposes of this document, it is assumed that up to five 200-square-foot cabins, accommodating two people each, will be constructed for seasonal employees. The cabins themselves will have no water, but a 500-square-foot showerhouse and central cooking and eating facility will be constructed nearby.

All utilities associated with the Tokositna visitor center, except those related to solid waste disposal, could be provided onsite. Electricity will be provided by a generator, and fuel storage will also be onsite. A septic system will be needed. Solid waste will be transported to another location for disposal. State-of-the-art technology and practices for remote sites will be implemented, emphasizing sustainable design and use.

The proposed action includes a major upgrade and extension of the Petersville Road. Improvements to the road will involve building up and widening the road base from mile 19 at the Forks Roadhouse to the Tokositna site at about mile 40. Extensive reconstruction will be done along the road from Petersville through Peters Creek Canyon. Six to seven miles of new construction from the west end of the canyon to the visitor center site will be required to complete access. This plan does not propose additional work on the portion of the road from the George Parks Highway to mile 19, as it is assumed that the road standards and conditions along this section are generally adequate for the purposes of this South Side DCP. Furthermore, maintenance of this section and additional improvements will likely be carried out by the state regardless of this development concept plan. [65]

As stated above, improvement and upgrade of the Petersville Road will likely take place over a number of years, depending on funding, mitigation, and other factors. Ultimately, the entire length of the road will likely be paved and designed to accommodate a variety of vehicle types, including automobiles, RVs, and buses. Appropriately sited bicycle and pedestrian enhancements will also be provided as part of, or separate from, the road and will be in keeping with the vision, goals, and objectives of the south side plan and with the state's Trails and Recreational Access for Alaska (TRAAK) program. It will also be designed for safe travel and be cost-effective to maintain. Interpretive signs and pullouts will be placed along the road;

[65] The 1999 *South Denali Citizens Consultation Committee Final Report* recommended modifying this development concept. The committee recommended that a visitor center be constructed along the Parks Highway and a nature center be constructed within the Denali State Park boundary in the Peters Hills to avoid an extensive upgrade of the Petersville Road through the canyon, thereby minimizing impacts to mining and backcountry uses.

specific locations and designs for these structures will be identified during future planning efforts. Winter maintenance of the road will not extend to the Tokositna site, but only from the George Parks Highway junction to the Forks Roadhouse at about mile 19. For analysis purposes, the following three options for Petersville Road development were prepared:

Option one – a road with two 10-foot driving lanes with 2-foot-wide paved shoulders and a separated 10-foot-wide paved bicycle/ pedestrian pathway.

Option two – a road with two 12-foot-wide driving lanes with 2-foot paved shoulders and a separated 10-foot-wide paved bicycle/ pedestrian pathway.

Option three – a road with two 12-foot-wide driving lanes with 6-foot paved shoulders to accommodate bicycles/pedestrians (i.e., no separated pathway).

Even under options one and two, about 3 miles of the bicycle/pedestrian pathway will have to be constructed on the shoulder of the road when passing through the Peters Creek Canyon and other areas due to terrain conditions. Based on the visitor experience outlined above, final design standards, as well as possible controls on access, will be developed by the state in a follow-up design process with tiered environmental documentation.

The full appreciation of a visit to a state or national park depends on a safe and enjoyable travel experience. The character of the Petersville Road will play a role in the Tokositna experience. Consequently, the rehabilitation/reconstruction of the Petersville Road will be designed to enhance the traveler's experience en route to the Tokositna Visitor Center by taking advantage of the area's natural beauty as an additional benefit to the "park" experience.

The Petersville Road beyond the Forks Roadhouse will be designed with horizontal and vertical curves that fit the landscape rather than long tangents that encourage high speed travel. The location and design of a road that includes an enjoyable pedestrian facility will require a blending of experiences for both the vehicular traveler and the pedestrian or biker.

The road will service roadside recreational opportunities and local access as well as the scenic attractions. Finally, the upgrade of the road must include practical environmental protection measures and accepted best management practices.

The state will address issues related to development and anticipated increased public use of state land along the Petersville Road through additional land planning and management. The state will reevaluate the provisions of the *Susitna Area Plan* for state land along the Petersville Road, with the intent of protecting scenic, wildlife, mineral, recreation, and other resource values. The state will develop proposed amendments to the *Susitna Area Plan* to define what uses would be allowed on state land along the road. The *Susitna Area Plan* already prohibits sales of state land along the Petersville Road north of the Forks Roadhouse. Subsequent planning will evaluate additional areas between the George Parks Highway and the Forks Roadhouse that should also be retained in state ownership. Land exchanges with the state could be considered to provide alternative borough lands that are better suited for development.

Central Development Zone (Denali State Park)

In cooperation and, where desirable, a partnership among the National Park Service, local communities, ANCSA Native corporations, and the state of Alaska will develop visitor facilities

and services at Talkeetna, Broad Pass, and in the central development zone of Denali State Park when the need and opportunity to do so are established. Consultation and coordination with local communities to define need and determine appropriate courses of action will be essential. For the state park central development zone this will entail constructing a visitor center up to 3,000 square feet in size.

The soon-to-be completed 320-square-foot visitor contact facility adjacent to the Alaska Veterans Memorial at Byers Lake will provide general visitor information until a new 3,000-square-foot visitor center could be built in this general area. The 3,000-square-foot visitor center will be constructed within the central development zone of Denali State Park within easy access of the George Parks Highway. It will be a joint state and national park facility and will be intended initially for summer use, but will be designed for year-round operations capability. The center will include space for distributing trip planning/orientation information and Denali National Park and Preserve shuttle bus reservations, a small area for interpretive displays, and public restrooms. Administrative space for a combined state and NPS staff of two to three people also will be included, as will storage areas. Parking will be provided for up to 25 cars and 15 buses or RVs. An access road of up to 2,000 linear feet will also be constructed, depending on the location of the visitor center. [66]

All utilities associated with this smaller visitor center, except those related to solid waste disposal, will be provided onsite. Onsite fuel storage also will be provided. Solid waste will be transported to another location for disposal.

An exact location for this visitor center will be selected through subsequent planning. Siting will consider views of Mount McKinley, hiking opportunities, wildlife and other impacts, and highway safety considerations.

In cooperation, and where desirable, partnerships for providing additional visitor services along the George Parks Highway may be pursued.

Interpretation [67]

Interpretation and education activities are important to the protection and use of the natural and cultural values of the park. Professionals and volunteers will carry out these important functions of interpretation and education by using a variety of media to reach park visitors and the general public.

For many visitors, a view of the McKinley massif will be the high point of their trip. The south side activity center will orient visitors to views of that part of the Alaska Range from both inside and outside the buildings. Also, since Mount McKinley is shrouded in clouds much of the time, some means of suggesting its magnificence should be displayed. Exhibits and audio-visual presentations at the activity center, displays at the Talkeetna ranger station, waysides along roads and trails, and guided tours and ranger talks will complete the range of interpretive services available on the south side of Denali.

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[66] The 2006 *Final South Denali Implementation Plan* amends this description. The Visitor Center would be 16,000 square feet with 9,000 square feet of facilities supporting a separated parking area. It would be located on the southern end of Curry Ridge rather than in the central development zone around Byers Lake, consistent with the original direction for South Denali in the 1986 GMP. The facility would be designed to accommodate 300-400 people at a time. Parking could accommodate 300 automobiles and 150 buses or RVs. A 3.5-mile access road would connect the visitor center to the parking area. See Map 16.

[67] A new *Resource Education Plan* will provide current and more in-depth guidance for interpretation at Denali.

Interpretive services on the north side will be enhanced by individualized computer terminals and interactive video displays in the visitor access center and also by wayside exhibits and improved publications. The primary means of interpretation on the north side will continue to be the programs given by NPS naturalists and the talks presented on the commercial tour buses.

The following interpretive themes will be developed for the park, with the greatest emphasis placed on the specific resources of each location:

- the ecosystems in the park, and the necessity for preserving large tracts of land to support the wildlife
- geology, focusing on the McKinley massif and the processes of faulting and glaciation
- mountain climbing, including both the history of the ascents of Mount McKinley and messages about minimum impact use and safety for contemporary mountaineers and backpackers
- man's role in the park, including the stories of the early pioneers and the discovery of gold in Kantishna, the work of Charles Sheldon (the hunter/naturalist who, along with the Boone and Crockett Club, was instrumental in establishing Mount McKinley National Park), and the ongoing subsistence use by area residents.

The National Park Service and its educational partners will provide wilderness education to all park visitors to assist in their understanding of the wilderness resource values protected in the Denali backcountry. Education will focus on interpreting the wilderness resource values articulated in the Wilderness Management section of this plan. Wilderness education could involve non-personal means in park visitor centers and Alaska Public Lands Information Centers, and also remotely via the Internet and print materials. Wilderness education in the backcountry will be provided entirely through personal services by concession, non-profit, or NPS guides.

Interpretive plans will be developed for all new facilities and programs. The park staff will update and implement the 1993 *Wayside Exhibit Proposal for Denali National Park and Preserve* (NPS 1993) and include more emphasis on cultural and historical resources. The National Park Service will also implement the recommendations of the historic furnishing report for the Pearson cabin. A *Plan for the Interpretation of Denali National Park and Preserve* (NPS 1990d) will be updated and amended as necessary.

Complete interpretive plans for new facilities and programs such as interpretation of the Kantishna Historic District, the park road, prehistoric uses in the Teklanika area, the Dry Creek Archeological District, and cultural and historic resources in the entrance area.

Entrance Area

Other entrance area actions include improving information and orientation at the railroad depot and highlighting cultural resources in the Riley Creek campground area with a 1-mile, accessible trail. [68] The main entrance sign (currently located along the Parks Highway near the Jonesville Bridge) will be replaced with a simpler sign and moved to the parking area just inside the park entrance. [69]

Headquarters

The Headquarters Historic District buildings and landscape will be rehabilitated to protect these historic resources and to provide new interpretive opportunities including walk-through tours. A year-round visitor contact station could be established in the existing maintenance office near the visitor parking area after consolidation of maintenance functions in the auto shop area. An off-season ANHA sales outlet could be established at this contact station or at the environmental education and science center. [70]

Define the upper limit or carrying capacity for attendance at dog sled demonstrations at park headquarters and implement a management strategy such as a ticket or reservation system as necessary.

Provide expanded interpretation (signs, wayside exhibits, etc.) of the Headquarters Historic District.

The National Park Service will add visitor facilities at Park Headquarters, such as restrooms, plug-ins, and a warming hut, to support winter use. Otherwise, there will be no new facilities besides those already in approved plans.

Savage

Interpretive activities at the Savage cabin will be expanded and will include living history, a variety of interpretive exhibits, and the use of sled dogs at designated times. Formal sled dog demonstration programs available at headquarters will not be duplicated. Dogs will still be based at headquarters and transported to the Savage cabin for interpretive programs during periods of higher visitor use. The sled dog demonstration loop trail at headquarters will be reconfigured to improve safety and enhance visitor viewing. [71]

Park Road Corridor

New facilities and programs for the park interior include installation of wayside exhibits at all rest areas. Wayside exhibits will not be installed at Stony Overlook; it will continue to function as an undeveloped picnic area.

Kantishna/Wonder Lake

The National Park Service will work in partnership with Kantishna lodge owners to provide interpretation (such as signs and site bulletins) of the historic Kantishna Roadhouse, the Quigley cabin, and the Old Eureka/Kantishna Historic Mining District. The Quigley cabin will be developed as an interpretive contact center upon resolution of ownership issues.

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[68] This trail has been completed as the McKinley Station Trail.

[69] During construction of the pedestrian bridge across the Nenana River, Alaska DOT&PF created a paved pull-off that allows vehicles to safely exit the highway for photos of this sign.

[70] Since the Murie Science and Learning Center was constructed as a new facility, the winter visitor contact station was incorporated into that design rather than converting the identified building into a year-round contact station.

[71] Maintaining a second interpretive site with sled dogs proved impractical, so interpretation at Savage Cabin now consists of a living history program.

The National Park Service will also continue to work cooperatively with Kantishna area lodges to develop other visitor opportunities. For example, the Jauhola cabin north of the Kantishna airstrip will be rehabilitated for use by the lodges and the National Park Service. Interpretive activities for small groups (up to 10 people) will be held there with use times allocated among the Kantishna lodges and the Park Service.

Backcountry

Consistent with the protection of the park and preserve's wilderness character, information about backcountry travel will generally be provided before visitors enter the backcountry. This will minimize or eliminate the need for signs or other markers in the backcountry itself. Trip planning and safety information will be available at park visitor centers, Alaska Public Lands Information Centers, and at visitor facilities in Denali State Park. This information will also be available through the Internet and print materials that could be distributed nationally and internationally.

Day use and overnight educational programs offered by the National Park Service, the Murie Science and Learning Center, and accredited educational institutions and non-profit organizations operating under a cooperative agreement with the National Park Service could be offered throughout the Old Park, park additions, and preserve. All educational programs taking place in the backcountry will be required to meet the criteria identified under Commercial Services.

South Denali

Up to two additional roadside exhibits will be developed at existing pullouts along the George Parks Highway.

Watchable Wildlife areas along the George Parks Highway and/or the Petersville Road will be identified and established based on existing and additional scientific information (e.g., wildlife, habitat). Such sites could include Horseshoe Creek and Troublesome Creek.

Self-guiding interpretive brochures will be developed for appropriate portions of the George Parks Highway and the Susitna River.

Accommodations

Entrance Area. The park hotel will be closed no later than 2002, and no hostel or other economy lodging will be constructed in the entrance area. [72]

Kantishna and Wonder Lake. The National Park Service will encourage private sector development of a small-scale hostel facility (20–30 people) on private land in Kantishna and recommend that this structure incorporate alternative energy systems such as photovoltaic. The hostel will include indoor accommodations, showers and restrooms, a central cooking area, and a secure food storage area. If not developed by the private sector, the National Park Service could build the hostel and issue a concessions contract for its operation. Guests will be transported to the hostel via the visitor transportation system or other Kantishna buses.

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[72] The last season for the park hotel was 2001, after which the structures were demolished or moved out of the park and reused.

Any further development of commercial visitor facilities on private land in the Kantishna mining district will be considered incompatible with the planned purposes of the park and the need to limit vehicle use in this portion of the park. The National Park Service is concerned that commercial development would increase the demand for vehicle use and proposes to avoid it by acquiring the surface estates to patented mining claims. This issue is discussed in greater detail in the "Land Protection Plan" section of this document (see Appendix L). The National Park Service will implement the 1994 Denali Task Force Report recommendation to acquire development rights and/or property to retain the existing character and approximate level of commercial use at Kantishna.

The Park Service will implement administrative changes to expedite acquisition of Kantishna mining claims.

Campgrounds

Throughout the frontcountry, campground maintenance will be improved and rehabilitation projects completed as necessary.

Entrance Area

A total of 50 sites will be added to the Riley Creek campground, including 25 tent camping sites and 25 walk-in sites similar to those at Morino Campground. [73]

A hike-in campground will be constructed along the proposed Nenana River trail approximately 1 mile downstream from the confluence of the Nenana and Yanert Rivers. This campground could include up to 15 sites, which will be phased in based on visitor demand and resource protection needs.

Park Interior

All the campgrounds beyond Savage River will be tent campgrounds accessible only by shuttle bus. Private RV access will continue to be allowed to Teklanika with a three-night minimum stay.

South Denali

Under the proposed action, only standard public campgrounds will be developed, as these are currently underprovided by the private sector. For purposes of this plan, standard campgrounds are defined as those having basic facilities such as water, picnic tables, grills, and vault toilets. They may even be more primitive than this in certain areas. They do not provide full RV-type services such as electrical hookups, RV dump stations, or shower-type restroom facilities. Construction of full-service campgrounds is encouraged on private lands in the south side planning area.

Public camping facilities will be developed or expanded in the Tokositna area, central development zone of Denali State Park, and Chelatna Lake.

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[73] The *Environmental Assessment for Construction of New Visitor Facilities in the Entrance Area of Denali National Park* (2001) included an action closing the 60-site Morino Campground, which occurred during the 2002 season. A new loop with 45 vehicle sites suitable for RV's were added to Riley Creek Campground, but 20 vehicle sites were eliminated from the existing two loops in part to make room for 27 walk-in tent sites similar to those lost at Morino. Thirty other existing sites in Riley Creek Campground are to be managed for tent-camping, although they have parking for small vehicles.

Tokositna Area
Up to 50 sites will be built in the vicinity of the proposed Tokositna visitor center for tents or primitive RV camping. Additional detail on exactly where campsites will be developed will be determined through subsequent planning and appropriate National Environmental Policy Act compliance for the developed area. Separated tent camping or walk-in sites could be considered. Camping facilities could be operated by the state, National Park Service, private concessions, or some combination thereof.

Central Development Zone (Denali State Park)
Camping opportunities in Denali State Park will be increased either by expanding the existing facility by up to 25 new sites at Byers Lake or developing a new campground of up to 50 sites elsewhere in the central development zone of the state park. Details on this campground expansion will be developed in a state park master plan amendment.[74]

Backcountry Campsites

Kantishna

Up to 5 designated camping areas of 1-3 sites each will be created in conjunction with the Corridor and Backcountry Hiker areas in units 41, 42, and 43 in the Kantishna Hills. These sites will be farther from the park road than the areas commonly used by day-hikers. Food storage and/or sanitation facilities could be placed in the designated campsites. Quotas will be adjusted as necessary in backcountry units in which new campsites are located depending on visitor experience and resource protection needs.

Chelatna Lake

Up to five primitive fly-in only tent camping sites will be developed at Chelatna Lake. Siting for these facilities will be done by state of Alaska personnel, in consideration of several factors — protection of wildlife, wetlands, and water quality; private lands in the area; and proximity to trail access.

Commercial Services and Facilities

See also information about concessioner-operated tour and visitor transportation system buses under Access - Park Road Management.

Entrance Area
The existing visitor access center will be expanded from 7,000 square feet to 14,000 square feet and adapted for use as an interpretive and discovery center. An expanded ANHA sales outlet and the theater will remain in the building, but all other functions will be moved to a new visitor services building to the southeast.

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[74] The *Final South Denali Implementation Plan* (2006) places this campground adjacent to the parking area for the Visitor Center at mile 134.6 of the Parks Highway, providing space for up to 50 tent sites and 50 RV sites. The implementation plan also includes a campground at mile 18.6 of the Petersville Road to include up to 20 tent sites and 20 RV sites.

Camper convenience services such as a general store, fast food and deli service, showers, and laundry will be provided at an expanded facility between the existing visitor access center and the Riley Creek campground. [75] The National Park Service will encourage the private sector to provide additional services outside the park, with shuttle access. The post office will be replaced with a larger building (approximately 2,000 square feet) near the new camper conveniences center. This building could be connected to the camper conveniences facility and will share a common parking lot.

Upon completion of the above actions, the existing buildings will be removed and the area returned to as near a natural condition as possible.

The McKinley Park airstrip will be closed and no longer available for commercial use. Commercial use of the airstrip will be eliminated by relocating all remaining flightseeing and air taxi services to airstrips outside the park. [76] The National Park Service will maintain the existing level of commercial use at the Kantishna airstrip and implement the 1994 Denali Task Force Report recommendation to acquire development rights and/or property to retain the existing character and approximate level of commercial use at Kantishna.

Wonder Lake
The National Park Service will monitor resource conditions on and near Wonder Lake (including loon nesting areas) to minimize impacts from canoe use. Based on this additional resource information, the National Park Service will set limits on canoe use by Kantishna lodges through the concessions permit process.

South Denali
Lodging, restaurants, and other primarily commercial facilities and services should only be developed on private lands. Small-scale ancillary food service may be appropriate in some cases on public lands and in public facilities. Construction of full-service campgrounds (with hookups) on private lands will be encouraged.

Backcountry
The NPS Management Policies 10.2.2 mandates commercial visitor services planning for national parks and preserves. Commercial services may be authorized as concession contracts or commercial use authorizations. A decision to authorize a concession is to be based on a determination that the service:

- is necessary and appropriate for public use and enjoyment of the park in which it is located and identified needs are not, nor can they be, met outside park boundaries,
- will be provided in a manner that furthers the protection, conservation, and preservation of the environment and park resources and values, and
- will enhance visitor use and enjoyment without causing unacceptable impacts to park resources or values.

For the purposes of commercial visitor services planning in the Denali backcountry, these criteria will apply to all commercial visitor service authorizations. To be consistent with the purposes of the park and preserve and the objectives of this plan, the criteria will be interpreted for Denali as follows:

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[75] The Riley Creek Mercantile was completed in 2000.

[76] The McKinley Park airstrip was not closed but is not available as a base for commercial activity. Some commercial enterprises make use of the strip for transportation under a concession or commercial use authorization from NPS.

- Commercial services are necessary and/or appropriate in the Denali backcountry if they meet the following criteria:
  - They depend on the unique character and environment of the Denali backcountry, and the same experience cannot be found on nearby public lands.
  - They are consistent with the purposes of the park and preserve as described in chapter 1.
  - They do one of the following:
    - They provide access to remote areas of the park and preserve where the time or equipment necessary for the independent traveler to reach those locations would otherwise be prohibitively lengthy or expensive.
    - They provide education and inspiration related to wilderness resources and values.
    - They assist visitors in exploring the backcountry in areas or by means that require specialized knowledge (e.g., mountaineering, dog mushing).

- Commercial services are provided in a manner that furthers protection, conservation, and preservation when they do all of the following:

  - o They teach and follow Leave-No-Trace principles for the sub-arctic wilderness environment.
  - o They provide education relevant to preservation of wilderness resources and values.
  - o They offer substantial benefits to the protection of the wilderness resources and values of the area.

- Commercial services do not cause unacceptable impacts to park resources or values when they do all of the following:
  - o Group size, number of groups, and travel modes are consistent with management area designations and avoid impacts on vegetation, wildlife usage, and cultural resources of the area.
  - o Groups follow Leave-No-Trace principles for the sub-arctic wilderness environment.
  - o The activities are consistent with management area standards for solitude, natural sounds, and other wilderness characteristics for each management area.

In the park additions and preserve, if a guided commercial activity or non-commercial educational program takes place in an area where the numbers of visitors are limited, the allowable number of parties or visitors participating in the guided activity will be no more than 50% of the total potential use of the area during any visitor season (summer/winter) in order to allow for non-guided uses. In the Old Park, the number of parties or visitors participating in the guided activity will be no more than 25% of the total potential use of the area during any visitor season (summer/winter) where such use is allowed. Among commercial and educational programs, the programs provided directly by the National Park Service and the Murie Science and Learning Center will have priority for available capacity.

To avoid adverse affects to resources, the National Park Service will be conservative in making available guided activities and similar educational programs. When establishing new programs, the NPS will evaluate the impact of the new use before offering the program in additional locations or adding more programs to the same area.

All new commercial services, and both new and existing operators, will be required to meet the criteria listed above. Activities or services not described in this section could be considered only in the southern additions designated as Management Area A.

Commercial Airplane Landings

- Air taxi landings could occur throughout the park additions and preserve. To be considered an "air taxi" landing, the majority of passengers on the flight must either be dropped off or picked up from a day trip or overnight stay and passengers do not remain with their airplane while on the ground. [77]
- "Scenic air tour landings" are distinguished by passengers remaining with their air plane while on the ground. Scenic air tour landings will be allowed on glaciers in all areas designated as Management Area A. Scenic air tour landings could also occur at the designated Portals on the Eldridge and Pika Glaciers; however, these areas will remain secondary and less used in accordance with their management area designation. Scenic air tour landings in these two areas will not occur when other landing locations are available and scenic air tour landings will be discouraged when climbers or mountaineers are present. These areas will be prioritized for monitoring and additional actions will be taken if management area standards are approached or exceeded. Scenic air tour landings could occur at Kahiltna Base Camp throughout the year. In all locations, landings for scenic air tours will be restricted to the hours between 9am and 9pm. [78]
- No flightseeing or air taxi services will be based at the McKinley Park airstrip. The National Park Service will work cooperatively with the Alaska Department of Trans portation and Public Facilities to develop a master plan for the Kantishna airstrip. Uses such as flightseeing by existing Kantishna area lodges will continue. Pedestrian and vehicle use on the airstrip will be reduced by adding a vehicle bypass around the airstrip.

Guided Hiking

- Guided hiking by the two Kantishna limited concessions permit holders will be allowed in designated areas along the park road west of mile 84, the Wonder Lake campground access road, and the McKinley Bar trail. These guided activities will be available only for overnight guests of the two permit holders. A maximum of two permits will therefore be available for guided hiking. These restrictions will not apply to the historic operator in Kantishna.
- Additional guided day-hiking could be continued in the western portion of the Old Park between Toklat River and Wonder Lake with access from Kantishna, limited to the same number of groups as at present (determined by average of last five years).
- Guided day-hiking in the Old Park east of Toklat River will be available only on the following entrance area trails:
    - The Rock Creek Trail and Roadside Trail between the Denali Visitor Center and Park Headquarters
    - The Bike Trail and Jonesville Trails between the Nenana River Bridge and the Denali Visitor Center
    - The Nenana River and Triple Lakes trails when planned construction or rehabilitation is complete (see 1997 *Entrance Area and Road Corridor DCP*)
    - The Savage Alpine Trail between Savage Campground and Savage River, only for those commercial groups staying at Savage Campground.

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[77] See Map 20.

[78] See Map 21.

- In the portion of the Kantishna Hills where designated campsites are available, over night camping by guided groups will be restricted to these campsites.
- Guided day-hiking and overnight backpacking could be considered throughout the park additions and preserve.

Guided Sport Hunting
The entire southwest Preserve will be divided into two sport-hunting guide areas with the dividing line between areas along the West Fork of the Yentna and through Shellabarger Pass. The change will take place immediately as an amendment to the existing sport-hunting concession contracts. See Map 19.

Other Activities
The following guided activities could continue to be authorized if the criteria described at the beginning of this Commercial Services section are met:
- Guided mountaineering on Mount McKinley and other peaks throughout the glaciated portions of the Alaska Range, (including lowland approaches), in the Old Park, park additions, and preserve
- Dog mushing expeditions in the Old Park, park additions, and preserve
- Winter day- or multi-day trips by ski or snowshoe in the park additions and preserve.

In addition, dog team freight hauling services in the Old Park, park additions, and preserve could continue to be authorized.

Information and Fee Stations

An entrance station will be constructed between the Parks Highway and the entrance to the Riley Creek campground. NPS employees at the entrance station will check and sell park passes and collect entrance fees. The fee area will be expanded to include the area east of the Savage River. The entrance station area will include expanded traffic lanes, including at least one lane for administrative and post office traffic.

The National Park Service, in cooperation with other land management agencies, will operate a visitor contact station in the Cantwell/Broad Pass area. This facility will provide information and registration/permitting for year-round use of the park and preserve's backcountry, with a particular focus on serving the needs of winter recreational visitors on the south side of the Alaska Range.

Trails

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

The trails near the park entrance and the short loop trails along the park road corridor will be maintained for continued use. The existing trail system in the entrance and headquarters areas will be upgraded, accessibility improved, and routine maintenance provided. Extensive rehabilitation will be completed in the Horseshoe Lake area.

On the south side of the Alaska Range, interpretive trails and/or hiking trails, where possible leading through the brush to alpine terrain in the state and national parks, will be developed in

the Tokositna area, Chelatna Lake, the central development zone of Denali State Park, and the Broad Pass/Dunkle Hills areas. The trails will generally be less than 5 miles in length (one-way) and will be developed for a diverse public with varied abilities and interests. Detailed trail locations will be developed through subsequent trail planning by NPS and state of Alaska personnel. Appropriate measures will be taken to minimize or eliminate impacts on vegetation and wildlife (see the "Mitigating Measures Common to All Action Alternatives" section).

The following trails will be constructed and maintained (also see Maps 4 to 11). No other new summer or winter trails will be added. Elsewhere in the park and preserve, the National Park Service will maintain a "no formal trails" policy.

Entrance/Headquarters Areas:

- Triple Lakes trail (7 miles) with footbridge connecting to the Riley Creek campground area (upgrade and relocate as needed). [79]
- Bicycle/foot trail (1 mile) connecting visitor services in the Nenana River canyon to visitor services inside the park. [80]
- Foot trail (8 miles) linking McKinley Village with the entrance area (Nenana River trail) with trailheads at each end.
- Upper section of Mt. Healy overlook trail (1 mile).
- From the Mount Healy overlook down a spur ridge to create a loop to the Taiga Trail
- 1-mile, accessible loop trail in Riley Creek campground to highlight cultural resources. [81]
- Reroute the steep portions of the Rock Creek trail and the section near the VTS parking lot (approximately 1 mile total). [82]

Park Road Corridor:

- A loop trail system in the Savage River area that includes a 1/4–1/2 mile loop located downstream from the proposed bus turnaround, a longer loop extending about 1 mile downstream with a footbridge for the approximately 1-mile return on the opposite side of the river, and a trail up the ridge to the east. This trail will connect to hiking trails extending to the top of the ridge and connecting to the Savage River campground. The trail downstream along the Savage River could possibly incorporate the historic horse trail. [83]
- A 1/4–1/2 mile accessible loop trail at Primrose pullout. [84]
- A 1/4 mile river access trail at the Teklanika rest stop.
- A 1/4–1/2 mile loop trail at each of the proposed Savage and Toklat rest areas.
- A 1-mile loop trail to the ridge north of Eielson Visitor Center. [85]

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[79] An environmental assessment for construction of this trail was completed in 2006 (NPS 2006b).

[80] Completed in 2005.

[81] Completed in 2006.

[82] Completed in 1999.

- From Eielson Visitor Center to Gorge Creek

- From the west end of Thorofare Bluffs down to the Thorofare River bar.

Wonder Lake/Kantishna:

- McKinley Bar trail from Wonder Lake campground access road to the river (upgrade and relocate this 2-mile trail as needed). [86]

- A loop from the water tower above Wonder Lake Campground up to the bench west of Wonder Lake and return

- A ¼-mile trail from the designated parking area, south along Lake Creek to the north end of Wonder Lake.

- A ¼-mile trail to the top of the small hill at the north end of Wonder Lake (between the lake outlet and the ranger station). The trailhead and viewing area at the lake outlet will be rehabilitated. [87]

- Some existing social trails within units 41, 42, and 43 in Kantishna, formalizing a trail system in this area

- The access route to the Jauhola cabin will be maintained as a trail, with motorized access by all-terrain vehicles allowed only for major rehabilitation projects.

Tokositna Area:

- A system of short hiking/interpretive trails in the visitor center area and longer trails through the brush to alpine terrain in Denali State Park and Denali National Park and Preserve will be developed in the Tokositna area, including a possible trail to Long Point.

Chelatna Lake:

- A hiking trail will be constructed through the brush from Chelatna Lake leading to alpine terrain in Denali National Park and Preserve. A sign covering basic trail and safety information will be placed at the trailhead.

Central Development Zone (Denali State Park):

- A hiking/interpretive trail will be developed in conjunction with the visitor center in the central development zone of the state park if the center is not located adjacent to the existing Byers Lake loop trail. Additional short hiking trails may be developed in this area.

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[83] The part along the Savage River was completed in 2000. An environmental assessment for the ridge trail was completed in 2006 (NPS 2006b).

[84] Completed in 2000.

[85] Completed in 2004.

[86] Completed in 1998.

[87] Completed in 1997.

Public Use Cabins

Public use cabins will be developed in the Tokositna area and at Chelatna Lake. The cabins will be designed and built for year-round use. Each cabin will be up to 400 square feet and will provide sleeping space for four to six people. No water will be provided in these cabins. Cabins will be sited by state personnel, with possible assistance from the National Park Service, based on private land issues in the area and protection of wetlands, water quality, and wildlife.

Tokositna Area:

- Up to four public use cabins will be built on state land in the vicinity of the Tokositna visitor center, near the site of the public campground.

Chelatna Lake:

- Up to two fly-in only public use cabins will be built on state land at Chelatna Lake. At least one will likely be located near the proposed trailhead.

Rest and Picnic Areas

The National Park Service will maintain existing rest areas at Teklanika and Polychrome. Two rest areas will be constructed near the Savage River: one will be located on the west side of the river for use by buses only and another near the campground will be available to the general public. The latter will provide an opportunity for mountain and wildlife viewing. Upon completion of the bus turnaround and rest area on the west side of the Savage River, the chemical toilets at Primrose will be removed. [88]

An additional rest area will be constructed at Toklat, with protection such as sheetpile installed along the river as necessary. Topography, soil type, and other design elements will determine the specific site, which could change by several hundred yards. Site design will also include alternative energy use to the extent practicable to reduce overall electrical demand at the Toklat road camp. [89]

Each rest area in the frontcountry will include interpretive exhibits, a shelter and comfort station, and a short (1/4–1/2 mile) loop trail.

Two new picnic areas with shelters and two to three tables each will be constructed in the entrance area: one near the new visitor services center and another near the environmental education and science center. Another picnic area with two to three tables but without a shelter will be constructed near the Savage River. [90]

A new picnic facility will also be incorporated into the design for the replacement Eielson Visitor Center. A comfort station will be constructed to accommodate visitors to the kennels and to the Headquarters Historic District. [91]

Gateway Community Planning

The state will continue to manage state rights-of-way to maintain safety and protect scenic values. Management tools include vegetation management, driveway and pullout location and design, frontage roads, enforcement of sign laws, and addressing encroachments. Selective brushing and vista clearing will be conducted to improve views along the George Parks Highway.

As appropriate, Matanuska-Susitna Borough's Special Land Use District currently in place in Denali State Park will be reviewed and revised to improve implementation and enforcement. [92]

The Matanuska-Susitna Borough expects to complete separate corridor management plans for the Petersville Road and portions of the George Parks Highway to develop community-based recommendations for managing continued growth in the region. Under these plans, the borough will manage its land along these corridors to protect resource values associated with the proposed development and to maintain and enhance the scenic driving experience. Borough land disposals along these routes could include deed restrictions, vegetative buffers, or other measures to protect corridor values. [93]

The state, the National Park Service, the boroughs, and other jurisdictions, as appropriate, will work together to manage recreational activities and other uses of public lands in the area. These uses will continue but will be managed to protect the area and preserve a quality experience. Existing travel modes, both motorized and nonmotorized (aircraft, snowmachines, boats, ATVs, skis, dogsleds, etc.) will be examined to determine the need for, and appropriateness of, new access points, parking, restrooms, trails, corridors, signing, mapping, and other special measures. [94]

State land management plans and policies will support the maintenance of mining activities. The state will work with the mining industry and individual claim holders to address mining issues in the project area, such as RS 2477 rights-of-way, recreational mining proposals, status and shared use of roads, and avoidance/mitigation of conflicts between mining and other land uses.

State scenic byway designation for portions of the George Parks Highway, including the section in Denali State Park, will be considered following corridor management planning by local governments. [95]

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[88] The Savage rest areas have been completed. The Primrose pull-out will be retained as the turnaround area for the Denali Natural History Tour.

[89] An environmental assessment for a permanent Toklat rest area was completed in 2004 (NPS 2004a) and installation of toilet facilities completed in 2005.

[90] The Savage River picnic area was completed as part of the Savage rest area project at the vehicle turnaround on the east side of the river.

[91] The Kennels comfort station was completed in 2005.

[92] The review and revision of the Matanuska-Susitna Borough's Special Land Use District for Denali State Park is scheduled for 2007.

[93] The *Petersville Road Corridor Management Plan* was completed in 1998.

[94] The 2006 *South Denali Implementation Plan and EIS* provides for the specified types of facilities.

[95] The stretch of Parks Highway from milepost 132 to 248 of the Parks Highway, including all of Denali State Park, was designated as a state scenic byway in 1998. The 2006 *South Denali Implementation Plan and EIS* commits the signatory agencies to provide technical support and facilitation for the process of state scenic byway designation between mileposts 105-132 south of Denali State Park if requested by the local communities.

Backcountry Management

General Vision and Goals

This backcountry management plan will guide the National Park Service in providing opportunities for a variety of wilderness recreational activities and experiences while recognizing and protecting the premier wilderness resource values of the entire backcountry. Areas in the Dunkle Hills and around the Ruth and Tokositna Glaciers on the south side of the Alaska Range will be managed for those visitors who want to experience the wilderness resource values or other resource values of the Denali backcountry but require services or assistance, or who are unable to make a lengthy time commitment. Areas along the park road in the Old Park and the Kantishna Hills will provide accessible opportunities for short- or long-duration wilderness recreational activities with only limited options for guidance or assistance the farther one gets from the park road. The remainder of the backcountry will be managed for dispersed, self-reliant travel, and will include opportunities for extended expeditions in very remote locations.

The wilderness area is zoned into a number of backcountry units, and only a limited number of overnight permits are issued for each unit. Fires, littering, cutting of vegetation, and other activities that would mar the environment are prohibited. Some vegetation trampling and trail formation occurs, but overall impacts are minor. Existing backcountry units and requirements for overnight camping permits, use limits, and food storage have been developed through previous planning efforts, including the 1976 *Backcountry Management Plan* and its subsequent modifications. These provisions will apply as described in Appendix F (Appendix D of the *Revised Draft Backcountry Management Plan EIS*).

To the extent possible, visitor use will remain dispersed so that no areas become overused. If visitor pressure for use of the backcountry increases, park managers may add accessible areas in the new park and preserve additions to the backcountry permit system.

Wilderness Management

General Guidance

The National Park Service will manage all backcountry areas of the national park to protect wilderness resource values and provide opportunities for wilderness recreational activities, consistent with the direction of law and policy, with particular attention to the following:

- ANILCA Section 101 lists "preserve wilderness resource values" as a fundamental purpose of ANILCA.
- ANILCA Section 102(13) states that the term "wilderness" as used in ANILCA has the same definition as in the Wilderness Act.
- ANILCA Section 202(3)(a) states that a fundamental purpose of the Denali park and preserve additions is to provide continued opportunities, including reasonable access, for wilderness recreational activities.

As described in chapter 1, the Wilderness Act identifies two key components of wilderness character as

1) generally appearing to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; and
2) having outstanding opportunities for solitude or a primitive and unconfined type of recreation.

The qualities of "affected primarily by the forces of nature" and the "imprint of man's work substantially unnoticeable" will be interpreted for Denali by the following characteristics:

- Absence of permanent human structures, including buildings, roads, trails, dams, and communications facilities
- Perpetuation of natural ecological relationships and processes and the continued existence of native wildlife populations in largely natural condition

Providing "opportunities for solitude" will include managing for visitor experiences with the following characteristics:

- Freedom from the reminders of society
- Privacy and isolation
- Absence of distractions, such as large groups, mechanization, unnatural noise, signs, and other modern artifacts

Providing a "primitive and unconfined type of recreation" will include recreation with these characteristics:

- Self-sufficiency, absence of support facilities or motorized transportation
- Direct experience of weather, terrain, and wildlife with minimal shelter or assistance from devices of modern civilization
- Lack of restriction on movement; freedom to explore in the way that is desirable given conditions of weather, terrain, and personal ability; ability to be spontaneous; minimal formal regulatory requirements

The above are the wilderness resource values that the National Park Service will seek to preserve at Denali. The NPS recognizes that ANILCA and other laws provide for exceptions in national park and wilderness management for particular uses or activities. Primary examples include:

- ANILCA 811 allows the use for subsistence purposes of snowmachines, motor boats, and other means of surface transportation traditionally employed for such purposes.
- ANILCA 1110(a) allows use of snowmachines, motorboats, and airplanes for traditional activities.
- ANILCA 1315(d) allows for the construction of a limited number of public use cabins or shelters in designated wilderness if necessary for the protection of public health and safety.
- ANILCA 1316(a) allows the establishment and use of temporary campsites, tent platforms, shelters, and other temporary facilities and equipment directly and necessarily related to the activities of taking fish and wildlife where such activities are allowed.
- Section 4(a-b) of the Wilderness Act establishes that the act does not change the statutory authority for which a park was created, nor does it lower the standards of any other act of Congress which might pertain to or affect such area, including the Antiquities Act or Historical Sites Act allowing for the preservation of historic structures.
- Section 4(c) of the Wilderness Act allows land managers the discretion to use motorized vehicles, use motorized equipment or motorboats, land aircraft, use other forms of mechanical transport, or construct structures or installations as necessary to meet the minimum requirements for the administration of the area

for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area).

In implementing this plan, and with future management actions, the National Park Service will, with every decision, forego actions that might have no seeming physical impact, but which will detract from the idea of wilderness as a place set apart, a place where human uses, convenience, and expediency do not dominate.

Group Size

The National Park Service will establish a maximum group size of 12 for backcountry areas of Denali for both private and guided groups, including guides. In Management Areas OP2 and D, the maximum group size will be six for both private and guided groups, including guides. The park superintendent could make an exception to the group size limit if that would benefit visitor safety or park resources. This limit does not apply in designated Hiker areas (trails) identified in the 1997 Entrance Area and Road Corridor DCP, but does apply on any trail that crosses into a backcountry area within the scope of this plan. Commercial and non-commercial groups will be required to have a group leader who is trained in Leave-No-Trace principles for tundra environments generally and Denali National Park and Preserve in particular. In all cases, larger groups (more than four) will be encouraged to disperse or stay on durable surfaces such as gravel river beds.

Human Waste [96]

Removal of human waste from the park will be required in the following areas:

- The West Buttress Route on Mount McKinley above the 14,000 foot camp
- Campsites within one-half mile of air taxi landing locations on glaciers unless pit latrines or other waste disposal facilities are provided.

In other glaciated locations, including the West Buttress of Mount McKinley below the 14,000-foot camp, climbers will be encouraged, but not required, to remove their waste. Additional requirements for removing waste from glaciated areas could be imposed in high use areas if waste handling technology and techniques improve to make more widespread removal practical. The National Park Service will emphasize education about human waste removal during climber orientation, during patrols, in working with mountaineering organizations such as the American Alpine Club, and in distributed publications.

The current rules on human waste in the Denali backcountry will remain in force. As described in the 2005 Superintendent's Compendium, these rules are as follows:

- Human body waste will be deposited in cat-holes when the ground is not frozen, dug at least 100 feet from any surface freshwater source.
- Toilet paper will be burned or removed as trash.
- Persons engaged in any travel (such as skiing, snowshoeing, aircraft landings) or activities (such as mountaineering, climbing, flightseeing, camping) in a glacier environment, such as Mount McKinley and other peaks and glaciers within the park and preserve, must dispose of all human wastes according to the following guidelines:
  - Use pit latrines where they are provided by the National Park Service, such as those typically located at the 7,000-foot and 14,000-foot base

[96] Human waste requirements are implemented through the Superintendent's Compendium under the authority of 36 CFR 2.14(a)(9) and 2.14(b).

camps along the West Buttress route, the Ruth Glacier in the vicinity of the Mountain House landing area, and elsewhere as provided.

- At locations without pit latrines, bag all human waste (feces) and carry it out or place it in a deep crevasse. On steeper technical routes outside of the West Buttress, the bag can be tossed away from the climbing route or shovel feces off and away from the route.

Trash/Garbage
The policy for trash removal in the park and preserve will continue to be "pack in, pack out." Visitors will be informed of the policy and asked to adhere to it.

Climbing Tools
Power drills for climbing activities will be prohibited throughout the park additions and preserve.

The following guidance for fixed and removable anchors will be implemented:

> Removable and fixed anchors, as well as other climbing equipment, must be used wisely and be closely managed in order to prevent the degradation of wilderness re sources and character. When anchors are necessary for climber safety, removable anchors are desired and highly recommended. Fixed anchors should not be placed merely for convenience.

Fixed anchors (such as webbing, bolts, pitons, chains) currently in place may remain. They may be replaced or removed by individual climbers during a climb or by the National Park Service during park operations. Safety remains a responsibility of the climber. The National Park Service will not, as a policy or practice, monitor fixed anchors to evaluate their condition. When a climber determines the need for anchor placement or replacement, this must be accomplished in compliance with regulated and permitted standards (for example, power drills may not be used). If unable to do so, the route should remain unclimbed. New, bolt-intensive climbing routes, such as sport climbs and "bolt ladders," are not appropriate and will not be allowed.

Placement of new anchors may be allowed when necessary to enable a safe rappel when no other means of descent is possible; to enable emergency retreat; during self-rescue situations; and on new routes when ascending a route to connect terrain that is otherwise protected by removable anchors (for example, one crack system or other natural feature to another). Permanent bottom to top fixed anchor routes will not be allowed throughout the Denali backcountry, with the exception of the headwall (15,300-16,200 feet) on the West Buttress route of Mount McKinley.

Registration and Permit Systems
The National Park Service will study and deploy the most efficient, cost-effective, and user-friendly system for park visitors to register or obtain permits to access the park backcountry where required. The goals will be to: 1) provide safety and resource protection information to visitors before they enter the backcountry; 2) track the amount and type of visitor use; 3) improve the existing system; and 4) if necessary, expand the system to serve new activities and/or areas. Some options that will be considered include:

- Same-day and advance permits or registration
- One-time, seasonal, and annual registration

- Staffed desks or automated kiosks in Anchorage, Fairbanks, Trapper Creek, Talkeetna, Cantwell, Healy, or other locations
- Permits and registration by phone, Internet, or mail, or through transportation services (e.g., air taxis, Visitor Transportation System (VTS) bus system).

The National Park Service will impose new registration requirements only in areas where use levels are sufficient enough that user conflicts and/or resource damage are occurring or will occur and when other methods for obtaining accurate information on visitor use and conveying essential visitor safety and resource protection information are unlikely to be successful. It is likely that overnight use and winter day use from the Kahiltna Glacier east will meet these criteria in the near future. The National Park Service will begin a system of voluntary registration for airplanes landing in the Old Park. To test the feasibility of advance backcountry registration, an experimental system for advance registration will be employed for dispersed camping and camping at designated campsites in the Kantishna Hills.

The number of available permits for climbers attempting to climb Mount McKinley will be restricted to 1,500 during the main mountaineering season (April 1- August 1). The limit of 1,500 will be reevaluated 10 years after approval of the backcountry management plan.

Communication Facilities

Communications facilities will be considered on a case-by-case basis following the minimum requirement/minimum tool process. New structures will be attached to existing structures wherever possible. For administrative purposes, the National Park Service will phase in the use of satellite phones or similar technology in the backcountry to avoid the need for new temporary or permanent communication facilities in backcountry areas.

Temporary Facilities

Section 1316 of ANILCA addresses temporary facilities related to the taking of fish and wildlife in national preserves in Alaska – not parks and monuments. This determination of applicability is based on the legislative history of ANILCA, which indicates that only preserve units of the national park system were covered by section 1316 (Senate Energy Committee Mark Up, 96th Congress, Oct. 9, 1979, p. 65). Temporary structures in support of subsistence activities are authorized under other authorities (section 1303 of ANILCA and 36 CFR 13.17).

In accordance with section 1316(b), the National Park Service has determined that the establishment of new temporary facilities (as defined below) in the preserve would constitute significant expansion of existing facilities and would be detrimental to the purposes for which the park and preserve were established, including the scenic, wilderness, and other natural values. This determination maintains the number of these facilities at present levels (1978 or 1985, which is higher), but it does not preclude or otherwise restrict authorized hunting and fishing activities in the preserve.

Those facilities to which this ceiling applies are defined as follows (the definitions were approved by the Alaska Land Use Council, February 1982):

"Temporary facility" means any structure or other man made improvement that can be readily and completely dismantled and/or removed from the site when the authorized use terminates. This definition should not be construed to include cabins.

"Tent platform" means a structure, usually made of manufactured timber products, constructed to provide a solid, level floor for a tent. Partial walls not exceeding 3 feet in height above the floor may be employed. Only the tent fabric, the ridge pole, and support poles may extend higher than 3 feet above the floor.

"Shelter" means a structure designed to provide temporary relief from the elements. A shelter is characterized as a lean to having one side open.

"Cache" means a small structure designed and constructed solely for the storage of equipment and food. A cache may be raised on poles to keep supplies away from bears or other animals. Existing regulations cover unattended or abandoned property (36 CFR 13.22). [97]

Section 1313 directs that a national preserve in Alaska be administered and managed as a unit of the national park system in the same manner as a national park with certain exceptions, including the taking of fish and wildlife for sport purposes. In addition, section 203 directs that the preserve be managed under the act of 1916, as amended and supplemented, which states that the primary purpose, among others, of a national park system unit is "to conserve the scenery . . . and leave [it] unimpaired for the enjoyment of future generations. " In establishing the preserve, Congress stated in section 202(3)a that the purposes of the unit are "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." The National Park Service has determined that additional temporary facilities above the current level would be detrimental to these purposes for the following reasons: (1) the introduction of facilities into an area where none or very few currently exist would be detrimental to the wilderness character of the park and preserve; (2) such facilities would encourage concentrations of use, which would increase the potential for adverse impacts from human waste, trash, and soil compaction and cause wildlife to avoid the area; and (3) there has been no demonstrated need for such facilities.

This policy is not intended to limit the use of portable tents that do not require platforms or other structures, temporary campsites normally a part of recreational outings, or shelters needed in emergency situations. ("Temporary campsite" means a natural, undeveloped area suitable for the purpose of overnight occupancy without modification.)

If the existing facilities are removed, no longer used, or destroyed, the superintendent will work with the facility user to locate a site for a replacement facility of similar size and type in a suitable area of the preserve. Likewise, if the existing facilities are adversely affecting the purposes of the unit or subsistence uses, the superintendent may authorize the replacement of temporary facilities with structures of similar size and type in other suitable areas of the preserve.

In the future, if changing use patterns and further analysis indicate that adjustments in this ceiling on temporary facilities are necessary, the National Park Service may propose, with adequate public notice and opportunity to comment, to adjust this ceiling upward or downward.

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[97] There is also a Denali special regulation applying to unattended and abandoned property at 36 CFR 13.63(c) prohibiting "leaving unattended and abandoned property along the road corridor, at Wonder Lake, and in the areas included in the backcountry management plan."

In developing such proposals, the Park Service will consider whether adequate alternative means are readily available and whether there is a potential for adverse impacts on park resources and uses, including subsistence.

The National Park Service will maintain an ongoing inventory of the location and description of temporary facilities. The inventory will be available for review at park headquarters.

Cabins

see also Public Use Cabins under Visitor Facilities and Services

The National Park Service has proposed revisions to the existing regulations contained in 36 CFR 13.17 that deal with cabins and other structures authorized under sections 1303, 1315, and 1316 of ANILCA. The revised regulations would further establish policy, criteria, and procedures for issuing cabin permits as authorized by ANILCA. The proposed regulations have undergone a separate public review process. [98]

The superintendent will maintain an ongoing inventory of the location and description of all cabins located in Denali National Park and Preserve. As part of the inventory, the cabins will be evaluated for potential historic significance pursuant to the National Historic Preservation Act, as amended in 1980. [99] The National Park Service will actively seek to determine any valid claims within applicable regulations for cabins on federal lands. Unclaimed cabins will be evaluated according to the pattern of public use associated with them since the unit was established. Those that support intermittent compatible activities or authorized local activities without any adverse effects on Denali's resources or other valid uses will be left standing. (For example, a cabin used for occasional winter dog team trips or used as an occasional stop over for local village to village snowmachine travel may be in this category.) Such cabins will be available for nonexclusive public use, including use by commercial guides, on a first come, first served basis or for emergency use. Where determined to be essential for public health and safety and where funding is available, the National Park Service may propose to maintain certain of these cabins. Maintenance by others may be permitted by the superintendent, but no possessory interest or exclusive use rights will be acquired.

Unclaimed cabins that do not support compatible activities or that have adverse effects on park resources or other valid uses may be proposed for removal, in accordance with section 1315(d) of ANILCA and section 106 of the National Historic Preservation Act, as amended in 1980, where applicable. For example, a cabin that regularly attracts recreational visitors to an area during a season of important subsistence use may be proposed for removal. If the National Park Service proposes to remove a cabin, public notice, and congressional notification in the case of public use cabins in wilderness, will be provided.

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[98] The regulations at 36 CFR 13.17 were finalized in 1986.

[99] See list of historic structures at footnote under Management Zoning – Historic Zone.

Subsistence Management

One of the purposes of ANILCA is "to provide the opportunity for local, rural residents engaged in a subsistence way of life to continue to do so," consistent with management of fish and wildlife in accordance with recognized scientific principles and the purposes for which each conservation system unit is established (ANILCA, section 101(c)). Section 202(3)(a) of ANILCA permits local residents to engage in subsistence uses within the 1980 additions to Denali National Park and Preserve in accordance with the provisions of title VIII of ANILCA.

Title VIII of ANILCA addresses subsistence management and uses. Section 802 presents the subsistence policy of ANILCA. This section states that, consistent with sound management principles and the conservation of healthy populations of fish and wildlife, the utilization of public lands in Alaska is to cause the least adverse impact possible on rural residents who depend upon subsistence use of the resources of such lands; that nonwasteful subsistence uses of fish and wildlife and other renewable resources on the public lands shall be given preference over other consumptive uses; and that federal land managing agencies, in managing subsistence activities and in protecting the continued viability of all wild renewable resources, shall cooperate with adjacent landowners and land managers.

Section 805(d) of ANILCA directs that the secretary of the interior shall not implement portions of the subsistence provisions if the state of Alaska enacts and implements subsistence preference laws which provide for the taking of fish and wildlife on federal lands for subsistence purposes, and which are consistent with the other applicable sections of ANILCA. The state did enact a law which meets the above criteria within the specified time. Consequently the state of Alaska's fisheries and game boards set the bag limits, methods of take, the seasons of take, and other factors related to the taking of fish and wildlife for subsistence purposes within Alaska, including the park units. [100]

"Trapping or any other customary trade practice within parks and monuments" is not intended "to be or become a solely or predominantly commercial enterprise beyond its traditional role as part of the subsistence regimen" (Federal Register, vol. 46, no. 116, June 17, 1981, "Rules and Regulations"). The National Park Service will work with the state of Alaska in monitoring the "customary trade" aspect of subsistence (including trapping), and will promulgate regulations consistent with the intent of title VIII of ANILCA (Senate Report 96 413, p. 234). [101]

Section 810 of ANILCA requires the heads of federal agencies to evaluate the effects upon subsistence uses of any proposed land withdrawal, reservation, lease, occupancy, use or other disposition of federal lands. These evaluations will be conducted by the National Park Service for all such actions. [102]

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[100] In December 1989 the Alaska Supreme Court ruled that the rural residency preference required by ANILCA violated the Alaska Constitution. Since that time the State has been unable to change its regulatory framework so that it complies with the ANILCA Title VIII requirements. Therefore the federal government through the Secretaries of the Interior and Agriculture established the Federal Subsistence Board to manage takings of fish and wildlife for subsistence uses on Federal public lands and waters in the state. (See 50 CFR 100, Final Temporary Rule, Federal Register/ Vol. 55, No 126, Friday June 29 1990) As a result the management of fish and wildlife harvest in the park are subject only to the Federal Subsistence Board's regulations. However, because ANILCA section 1313 provides "that the taking of fish and wildlife for sport purposes and subsistence uses and trapping shall be allowed" lands in the Preserve are subject to regulations of both the Federal Subsistence Board and the Alaska Board's of Fish and Game concurrently.

Section 814 directs the secretary of the interior to prescribe regulations, as necessary and appropriate, to implement title VIII of ANILCA. Regulations to implement the provisions of ANILCA, including title VIII, became effective on June 17, 1981, following a public comment period on proposed regulations. These regulations (36 CFR 13) address numerous aspects of subsistence management and uses within the park units in Alaska, including determination of which rural residents qualify to engage in subsistence activities in the park units, what means and methods of access may be used in conducting subsistence activities, what laws and regulations apply to the taking of fish and wildlife for subsistence purposes, subsistence use of trees, and how and under what conditions subsistence uses may be temporarily terminated. Residents of the following communities are authorized by 36 CFR 13.63(a)(1) to engage in subsistence activities in Denali National Park and Preserve: Cantwell Minchumina, Nikolai, and Telida. These regulations are considered interim regulations and are subject to refinement and change as better understandings of the requirements of subsistence uses in the park units, and its management, are attained.

Subsistence Resources Commission

Sections 805 and 808 of ANILCA authorize the establishment of regional advisory councils and subsistence resource commissions, respectively. The councils and commissions have been established and are executing their duties as defined by ANILCA. The regional advisory councils currently advise on subsistence matters on both federal and state lands. [103] Section 808 of ANILCA states that

> the Secretary and the Governor shall each appoint three members to a subsistence resources commission for each national park or park monument within which subsistence uses are permitted by this Act. The regional advisory council established pursuant to section 805 which has jurisdiction within the area in which the park or park monument is located shall appoint three members to the commission each of whom is a member of either the regional advisory council or a local advisory committee within the region and also engages in subsistence uses with in the park or park monument. Within eighteen months from the date of enactment of this Act, each commission shall devise and recommend to the Secretary and the Governor a program for subsistence hunting within the park or park monument. Such program shall be prepared using technical information and other pertinent data assembled or produced by necessary field studies or investigations conducted jointly or separately by the technical and administrative personnel of the State and the Department of the Interior, information submitted by, and after consultation with the appropriate local advisory committees and regional advisory councils, and any testimony received in a public hearing or hearings held by the commission prior to preparation of the plan at a convenient location or locations in the vicinity of the park or park monument. Each year thereafter, the commission, after consultation with the appropriate local committees and regional councils, considering all relevant data and holding one or more additional hearings in the vicinity of the park or park monument, shall make recommendations to the Secretary and the Governor for any changes in the program or its implementation which the commission deems necessary.
>
> (b) The Secretary shall promptly implement the program and recommendations submitted to him by each commission unless he finds in writing that such program or recommendations violates recognized principles of wildlife conservation, threatens the conservation of healthy populations of wildlife in the park or park monument, is contrary to the purposes for which the park or park monument is established, or would be detrimental to the satisfaction of subsistence needs of local residents. Upon notification by the Governor, the Secretary shall take no action on a submission of a commission for sixty days during which period he shall consider any proposed changes in the program or recommendations submitted by the commission which the Governor provides him.

The commission for Denali National Park and Preserve is proceeding with the formulation of a program. If any of the recommendations of the commission, which are accepted by the secretary of the interior, are in conflict with components of the general management plan, land protection plan, or other park planning documents, these planning documents will be amended or revised to incorporate the commission's recommendations.

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[101] Regulations have since been published. See the definitions for "customary trade" in 36 CFR 13.42 and 50 CFR 100.27(c).

[102] 810 evaluations were completed for the 1986 GMP and the subsequent amendments, and are contained within those documents.

[103] The regional advisory councils now advise the Federal Subsistence Board regarding federal lands.

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Subsistence Access

Access to subsistence resources is provided for in section 811 of ANILCA which states:

(a) The Secretary shall ensure that rural residents engaged in subsistence uses shall have reasonable access to subsistence resources on the public lands.

(b) Notwithstanding any other provision of this Act or other law, the Secretary shall permit on the public lands appropriate use for subsistence purposes of snowmobiles, motorboats, and other means of surface transportation traditionally employed for such purposes by local residents, subject to reasonable regulations.

Authorized means of access for subsistence uses in Denali National Park and Preserve are snowmachines, motorboats, and dog teams, and they are governed by existing regulations (36 CFR 13.46). If another means of surface access is shown to have been traditionally employed in the unit for subsistence purposes, it may be permitted in that unit subject to reasonable regulations. The existing regulations contained in 36 CFR 13.46 do not allow for transportation modes other than snowmobiles, motorboats, and other means of surface transportation traditionally employed. Any additional information about traditional means will be reviewed on a case by case basis. A definition of "traditional" is provided in Appendix I. [104]

The legislative history of ANILCA indicates that it was not Congress's intention to foreclose the use of new or presently unidentified means of surface transportation (Senate Report 96 413, p. 275). New modes of access that are developed and implemented for general use in rural Alaska and originate from technological advances which cannot be shown to have been traditionally employed may be allowed in the future for subsistence purposes under circumstances that prevent waste or damage to fish, wildlife, or terrain and would not degrade other park resources or values. The effect of new technology on areas and intensity of subsistence use would also need to be addressed. Off road vehicles are permitted for access for subsistence purposes where they can be shown to be a traditional means of access. Existing information indicates that specific ORV use has not regularly been used for subsistence purposes. [105]

The use of aircraft as a means of access to areas within the park and preserve for purposes of taking fish or wildlife for subsistence purposes is prohibited except in cases of extraordinary hardship, when a permit may be granted by the superintendent pursuant to 36 CFR 13.45. [106] In allowing for exceptions to the ban on aircraft use for subsistence activities, the legislative

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[104] The 2005 Cantwell Subsistence Traditionally Employed ORV Final Determination concluded that off-road vehicles had been traditionally employed in areas of the park additions near Cantwell and defined the "traditional use area." The 2007 Cantwell Subsistence Off-Road Vehicle Management Environmental Assessment provided management guidance, designating four trails and the floodplains of Cantwell Creek and Bull River for ORV use for subsistence access, and mandated a regulation prohibiting ORV use elsewhere in the traditional use area. See Map 13.

[105] See footnote above for modification to this conclusion.

[106] The regulation 36 C.F.R. 13.45 applies only to parks and monuments, not to preserves. Aircraft use is allowed in preserves for both subsistence and sport hunting.

history of ANILCA states that "these types of situations are the exception rather than the rule and that only rarely should aircraft use for subsistence hunting purposes be permitted within National Parks, National Monuments and National Preserves" (House, Nov. 12, 1980, Congressional Record H 10541).

Subsistence Management Plan

The National Park Service will prepare a subsistence management plan for Denali National Park and Preserve to provide additional clarification in the management of subsistence uses.[107] This management plan will address the major topics related to management of subsistence, such as timber cutting, shelters and cabins, trapping, resident zones, access, acquisition of resource and user data, and resolution of user conflicts and possible closures. The approved subsistence hunting program of the subsistence resource commission will be a primary component of the subsistence management plan. The subsistence management plan will incorporate the approved subsistence hunting program of the subsistence resource commission and will be revised as necessary to incorporate any future revisions to the approved subsistence hunting program.

The subsistence management plan will be developed in cooperation with all affected parties, including the state of Alaska, and the appropriate regional advisory councils and subsistence resource commission. Following adequate notification a draft plan will be available for public review and comment for a minimum of 60 days prior to its approval. Significant revisions to the plan require the same public involvement procedures.

[107] The *Denali National Park and Preserve Subsistence Management Plan* was completed in 2000 and is regularly updated.

Resource Management

Natural Resources [108]

The national interest in Denali that led Congress to expand the park in 1980 was preceded in 1976 by action on behalf of the international community to designate the original park acreage as a biosphere reserve under the Man and the Biosphere program of UNESCO (the United Nations' Educational, Scientific and Cultural Organization). The purpose of this designation was to support the protection of the park's natural processes and genetic diversity for comparison with areas that have been altered by human activity. The primary intent of Congress in enlarging the park and preserve was similarly to enhance the protection and interpretation of Denali's natural resources.

Given the clear preservation intent of the Congress and faced with a growing concern about the impacts of increasing visitor use and other activities, the National Park Service is continuously expanding its resource management program. The intent of the resource management program is to understand the natural forces that shape Denali's environment and to avoid or eliminate activities that significantly interfere with natural processes. Although much has been done by the state of Alaska, the National Park Service, other government agencies, universities, and private organizations to understand the resources of this region, there is an identified need for additional study, understanding, and interpretation of Denali's natural systems so that significant impacts can continue to be avoided or mitigated in the future.

Resource management plans are prepared to describe the scientific research, surveys, and management activities that will be conducted in each national park system unit. Information obtained from research described in the resource management plan is used by park managers to better understand the unit's cultural and natural resources and is used in making resource related decisions and funding requests. Resource management plans are evolving documents that respond to the changing requirements of managing a unit's resources. They are reviewed at least once each year and are updated as necessary. The most elementary resource management plan is essentially a list of proposed research projects that are required to better understand the resources of a national park system unit. More fully evolved resource management plans may include detailed management strategies for addressing specific resource issues. The *Entrance Area and Road Corridor DCP* called for completion of a resource management plan and other action plans to address issues such as revegetation, fish habitat restoration, bear management, wildland fuel reductions around structures, hazardous tree management, and administrative uses of resources. [109]

The primary concerns of natural resource managers at Denali are briefly discussed in the following paragraphs.

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[108] The natural resource concerns described in the original 1986 GMP text still apply. However, they are now a subset of the total range of issues and concerns addressed by research and resource management at Denali. In particular, long-term ecological inventory and monitoring has assumed much greater importance because of language in the National Parks Omnibus Management Act of 1998 which mandated a program of inventory and monitoring. For Denali, this program has evolved into participation in NPS's Central Alaska Network which addresses ecological monitoring on a regional basis. The park also continues research and resource management related to current park management issues. A forthcoming Resource Stewardship Strategy (2008 est.) will describe the overall park strategy for research and resource management.

[109] A *Resource Management Plan* was completed in 1998. However, this document will be superseded by a *Resource Stewardship Strategy* to be completed in 2008 (est.). The park also has completed an updated *Bear-Human Conflict Management Plan* (2003) and a *Hazardous Vegetation Fuel Treatment Plan* (2003).

Fish And Wildlife

The National Park Service is mandated by ANILCA and other laws to protect the habitat for, and populations of, fish and wildlife within the park (ANILCA, section 202(3)(a) and 16 USC 1). The National Park Service will strive to maintain the natural abundance, behavior, diversity, and ecological integrity of native animals as part of their ecosystems. NPS management of fish and wildlife will generally consist of baseline research and management of the human uses and activities that affect such populations and their habitat, rather than the direct management of resources.

The Alaska Department of Fish and Game, under the constitution, laws, and regulations of the state of Alaska, is responsible for the management, protection, maintenance, enhancement, rehabilitation, and extension of the fish and wildlife resources of the state; and in accordance with the state constitution, the department manages fish and wildlife using the recognized management principle of sustained yield. Within conservation system units, including Denali National Park and Preserve, state management of fish and wildlife resources is required to be consistent with the provisions of ANILCA; therefore, some aspects of state management may not apply within the park.

The National Park Service and the state of Alaska will cooperatively manage the fish and wildlife resources of the park and preserve. A memorandum of understanding between the National Park Service and the Alaska Department of Fish and Game (see Appendix G) defines the cooperative management roles of each agency. The "Department of the Interior, Fish and Wildlife Policy: State Federal Relationships" (43 CFR 24) further addresses intergovernmental cooperation in the protection, use, and management of fish and wildlife resources. The closely related responsibilities of protecting habitat and wildlife populations, and of providing for fish and wildlife utilization, require close cooperation of the Alaska Department of Fish and Game, the National Park Service, and all resource users.

Sportfishing is an allowable use throughout the park and preserve; subsistence fishing, hunting, and trapping are allowed in the new park additions where such uses are traditional (ANILCA, section 202(3)(a)); hunting, fishing, and trapping are allowed in the preserve (ANILCA, sections 1313 and 1314 and applicable state law). Trapping in national park system units can be conducted only using implements designed to entrap animals, as specified in 36 CFR 1.4 and 13.1(u). ANILCA requires that harvest activities remain consistent with maintenance of healthy populations of fish and wildlife in the preserve and natural and healthy populations in the park (ANILCA, section 815(1)).

Congress recognized that programs for the management of healthy populations may differ between the National Park Service and the U.S. Fish and Wildlife Service because of differences in each agency's management policies and legal authorities; therefore, "the policies and legal authorities of the managing agencies will determine the nature and degree of management programs affecting ecological relationships, population dynamics, and manipulation of the components of the ecosystem" (Senate Report 96 413, p. 233).

The state of Alaska, through the boards of game and fisheries, establishes fishing, hunting, and trapping regulations for the park and preserve, consistent with the provisions of ANILCA. The Park Service will cooperate with the state wherever possible to establish regulations that are compatible with park management goals, objectives, and NPS policies.

Section 805(d) of ANILCA authorizes the state to manage the taking of fish and wildlife for subsistence purposes on federal lands if state laws are enacted and implemented that satisfy specific criteria in sections 803, 804, and 805 of ANILCA. [110]

A subsistence resource commission has been established for the park in accordance with section 808 of ANILCA. The commission is charged with devising and recommending a subsistence hunting program for the park. (see the "Subsistence" section for a more complete discussion of the commission).

Regarding customary and traditional subsistence uses in parks, monuments, and preserves in Alaska, the legislative history of ANILCA states,

> The National Park Service recognizes, and the Committee [on Energy and Natural Resources] agrees, that subsistence uses by local rural residents have been, and are now, a natural part of the ecosystem serving as a primary consumer in the natural food chain. The Committee expects the National Park Service to take appropriate steps when necessary to insure that consumptive uses of fish and wildlife populations within National Park Service units not be allowed to adversely disrupt the natural balance which has been maintained for thousands of years (Senate Report 96 413, p. 171).

The National Park Service "may temporarily close any public lands . . .. or any portion thereof, to subsistence uses of a particular fish or wildlife population only if necessary for reasons of public safety, administration, or to assure the continued viability of such population" (ANILCA, section 816(b)). Except in emergencies, all such closures must be preceded by consultation with the appropriate state agencies. If it becomes necessary to restrict the taking of populations of fish and wildlife in the park, nonwasteful subsistence uses will be accorded priority over the taking of fish and wildlife for other purposes.

The state has developed resource management recommendations containing management guidelines and objectives that are generally developed for broad regions. Therefore, some of the guidelines and objectives may not be applicable to the park and preserve. The state has also developed fish and wildlife management plans. The master memorandum of understanding indicates that the Park Service will develop its management plans in substantial agreement with state plans unless state plans are formally determined to be incompatible with the purposes for which the park was established.

Habitat and animal population manipulation will not be permitted within the park except under extraordinary circumstances and when consistent with NPS policy, as described in the master memorandum of understanding. Congressional intent regarding this topic is presented in the legislative history of ANILCA as follows:

> It is the intent of the Committee that certain traditional National Park Service management values be maintained. It is contrary to the National Park Service concept to manipulate habitat or populations to achieve maximum utilization of natural resources. Rather, the National Park Service concept requires implementation of management policies which strive to maintain the natural abundance, behavior, diversity, and ecological integrity of native animals as part of their ecosystem, and the Committee intends that that concept be maintained (Senate Report 96 413, p. 171).

Aquatic habitat of the park and preserve will be protected to maintain natural, self-sustaining aquatic populations. The introduction of eggs, fry, or brood stocks, and the alteration of natural aquatic habitat, will not be allowed. Artificial stocking of fish in park and preserve waters will be considered only if necessary to reestablish species extirpated by man's activities.

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[110] The National Park Service now manages the taking of fish and wildlife for subsistence purposes on federal lands. Please see the discussion above under Subsistence Management.

In recognition of mutual concerns relating to the protection and management of fish and wildlife resources, the National Park Service and the Alaska Department of Fish and Game will continue to cooperate in the collection, interpretation, and dissemination of fish and wildlife data. The National Park Service will continue to permit and encourage the Alaska Department of Fish and Game to conduct research projects that are consistent with the purposes of the park and preserve.

The park's informational programs will inform visitors about the allowable uses of the park and preserve, including consumptive uses of fish and wildlife, to prevent or minimize user conflicts. Information will also be provided to visitors about ways to avoid or minimize adverse effects on fish and wildlife populations and their habitats.

Specific NPS Concerns

Decreasing Visibility of Wildlife along the Road Corridor. Because of a concern that increasing vehicle traffic on the park road is causing unacceptable impacts on wildlife, this plan proposes further restrictions on the use of the park road (refer to the north side proposals under "Visitor Use and Development"). This decision is supported by the data gathered in a recent study (NPS, Singer and Beattie 1984). The existing visitor transportation system limits the number of vehicles on the park road, and training has helped drivers avoid some of the incidents that are particularly disturbing to wildlife. These actions have been effective in lessening impacts on wildlife and will be continued, and the impacts of vehicle use will continue to be monitored.

Human/Bear Conflicts. A major concern of park managers is the potential for human/bear conflicts because they threaten human safety and could result in a loss of wild and free ranging grizzly bears. While no fatalities have occurred, the number of encounters and incidents of property damage might signify a change in the natural behavior of bears. Recently, however, the upward trend in encounters has been reversed through management action. In the period 1972 1980 the number of human/bear encounters increased three to five times in the frontcountry where the campgrounds are located. More human injuries by bears were reported during the period from 1970 to 1981 than during all previous years. Additionally, from 1978 to 1981 there were reportedly up to 40 occurrences annually of humans being approached by bears showing curiosity or lack of fear. An analysis of available records through 1981 indicated that Denali's backcountry human/grizzly incident rate was the highest reported in the national park system.

In 1982 the park staff implemented a comprehensive human/bear conflict management program to minimize encounters within the park. As part of that program all visitors receive printed literature concerning bears, and all backcountry permit holders also receive verbal instruction. Other features of the program include ranger patrols, bus driver guidance, employee training, and use of bear-proof food storage and trash facilities. [III]

The program has been successful in reducing problems. Between 1982 and 1985 parkwide conflicts were reduced by 30 percent, and the incidence of bears obtaining food in the backcountry was reduced by 74 percent. Prior to these findings the National Park Service was considering campground closures to reduce the potential for human/bear encounters. Based on the success of the bear management program, the National Park Service is no longer actively

[III] *Denali's Bear-Human Conflict Management Plan* was last revised in 2003.

considering the removal of campgrounds along the park road. However, if the incidence of human/bear encounters increases in the future, the issue of campground removal will be reevaluated. The campgrounds along the park road are particularly desirable accommodations; however, an adequate number of campsites are now available outside the park entrance to meet visitor demand. Additional campgrounds are proposed for the south side of Denali. Campground development in the lowlands on the south side of Denali could increase human/bear encounters in that area.

Present management actions to minimize human/bear conflicts will continue. The park staff will work to improve the incident reporting process, increase employee training, enhance the field response capability, and promote greater visitor awareness. In addition, research has been initiated to determine the seasonal distribution and relative abundance of grizzly bears. This information will be correlated with traditional hiker routes and camping areas to identify areas with high potential for conflicts. Research has been undertaken to improve backcountry food containers, determine the effectiveness of temporary area closures, and establish appropriate levels of visitor use.

A past solution in many parks has been to relocate problem bears; however, this concept has two flaws. First, it does not remedy the situation that caused the bear to become a problem, and the bear either returns or remains a problem somewhere else. Second, removal of bears alters the genetic and social integrity of the natural bear population, which is a key feature of this particular biosphere reserve. Unhunted and unmanipulated natural bear populations are almost unavailable elsewhere, and Denali's population is a valuable control group for studies of other populations. Removal of bears disrupts the natural social diversity of a population and in time could lead to a population where only the shy and reclusive are unnaturally selected. The state of Alaska also recognizes problems with a relocation policy and prohibits the relocation of Denali bears to areas outside the park boundaries (ADF&G 1982).

Decline in Denali Caribou Herd. The decline in the Denali caribou herd is another matter of immediate management concern. The herd, estimated to number 20,000 to 30,000 in 1944, declined to a possible low of 900 to 1,200 individuals in 1976. It currently appears to be on the rise and numbers approximately, 2,600 today. [112] While caribou are known to experience rises and declines in population, the reasons for the dramatic decline of the Denali herd are the subject of continuing research. Several factors have been suggested, including past hunting pressure outside the park, road and other development, disease, natural predation, and declining range quality. Emigration, or exchange between the Denali and other herds, has also been considered. The state of Alaska has prohibited hunting of the Denali herd since 1977.

Ground and air patrols will be initiated to prevent harassment and poaching during times when caribou are migrating near the park road or otherwise more susceptible to the impact of humans. Other activities related to caribou are described in the park's "Resource Management Plan."

Wolves. The protection of healthy and natural wolf populations within Denali is a continuing objective of the National Park Service. Wolves are important predators within Denali but are a species of relatively low density, so their role in the natural ecological processes is easily altered by man. The behavior and significance of the wolves at Denali were most eloquently discussed by Adolph Murie in his book, The Wolves of Mount McKinley (1944). In consideration of the

[112] The caribou population was 2,050 in the fall of 2005. The population has fluctuated between approximately 1,700 and 3,700 animals since 1986.

great importance of the small wolf population at Denali, and because the range of some of Denali's wolves extends beyond the park's boundaries, the park staff is particularly concerned with safeguarding the viability of these animals.

Park managers will continue to protect dens, secondary homesites, and rendezvous sites from recreational use disturbance through seasonal closures and a monitoring program. Aerial patrols will be increased to protect wolves against illegal hunting. ANILCA permits subsistence hunting and trapping of wolves by eligible subsistence users in the park additions, and both subsistence and sport harvests by all properly licensed hunters and trappers are permitted in the preserve. Action will be taken to ensure that legal subsistence and sport harvests are consistent with the legislative objectives for wildlife protection in the area, one of which is to maintain natural predator/prey relationships. To minimize human influences on the predator/prey balance in the designated wilderness, the park staff will initiate research to determine the nature and extent of pack territories, and recommendations will be developed for the protection of packs whose primary territories are in the wilderness but extend into areas otherwise open to harvest. The superintendent has reserved the authority to close portions of the park or the preserve to subsistence and sport hunting of wolves. Such closures could be instituted on an emergency, temporary, or permanent basis. Such action would require public notification of the reasons for the action (36 CFR 13.30).

South Denali. Studies on the natural and cultural resources and human uses of the planning area will be conducted in advance of south side development as appropriate. The National Park Service, the state, and others will work cooperatively to carry out this research. Studies will have the objectives of providing broad spectrum resource data useful in environmental analyses and in addressing human use issues; providing site-specific resource information for facility design and siting; and filling voids in existing baseline information, particularly as it relates to sensitive species or ecosystem elements.

Shorelands, Tidelands, And Submerged Lands

The Submerged Lands Act of 1953, the Alaska Statehood Act of 1958, and the state constitution provide for state ownership of the water (subject to the reservation doctrine discussed below in the "Water Rights" section), shorelands (the beds of navigable waters), tidelands (lands subject to tidal influence), and submerged lands (lands seaward from tidelands).

Determinations of what waters are navigable is an ongoing process in Alaska at both the administrative and judicial levels. A 4 mile segment of the Tokositna River (Seward Meridian, T30N, ROW) has been determined navigable by the Bureau of Land Management. The matter of navigability of portions of the Kantishna and Muddy rivers is still in adjudication. Other water bodies may be determined navigable in the future. There are no tidelands or submerged lands within the unit.

The National Park Service will work cooperatively with the state to ensure that existing and future activities occurring on shorelands underlying the waters within and adjacent to the unit boundary are compatible with the purposes for which the unit was created. Any actions, activities, or uses of nonfederal lands that will alter these lands or result in adverse effects on water quality or on the natural abundance and diversity of fish and wildlife species will be opposed by the National Park Service. The National Park Service will manage the unit uplands adjacent to shorelands to protect their natural character.

Additionally, the National Park Service recommends that the state close these areas to new mineral entry or to extraction of oil, gas, sand, and gravel resources, and the Park Service will apply to the state for these closures. The National Park Service will also pursue cooperative agreements with the state for the management of lands under navigable water bodies.

Management of Water Columns

Sections 101 and 201 of ANILCA and 16 USC 1a 2(h) and 1c direct the National Park Service to manage all waters within the boundaries of Denali National Park and Preserve. The state of Alaska has authority to manage water, based on the laws cited in the previous section. These laws provide for water management by both the state and the National Park Service.

The National Park Service will oppose any uses of waterways that will adversely affect water quality or the natural abundance and diversity of fish and wildlife species in the unit. The National Park Service will work with the state on a case by case basis to resolve issues concerning the use of the various waterways where management conflicts arise. Cooperative agreements for the management of uses on the water will be pursued if a case by case resolution of management issues proves unacceptable to the National Park Service and the state.

Water Rights

In Alaska, two basic types of water rights doctrines are recognized: federal reserved water rights and appropriative water rights. The reservation doctrine established federal water rights on lands reserved, withdrawn, or set aside from the public domain for the purposes identified in the documents establishing the unit. State appropriative rights exist for beneficial uses recognized by the state, including instream flows, and they are applied to lands where federal reserved water rights are not applicable. No appropriative rights (federal or state) have been applied for in the unit.

For waters available under the reservation doctrine, unless the United States is a proper party to a stream adjudication, the National Park Service will quantify and inform the state of Alaska of its existing water uses and those future water needs necessary to carry out the purposes of the reservation. When the reserve doctrine or other federal law is not applicable, water rights will be applied for in accordance with Alaska laws and regulations. In all matters related to water use and water rights, the National Park Service will work cooperatively with the state of Alaska.

Mineral Management[113]

Mining on valid existing claims is authorized in the park subject to applicable laws and regulations. In the absence of any new federal legislation governing mineral development in Denali, the level of mining activity is expected to remain fairly constant for the next 10 years. The National Park Service would oppose a significant increase in mining operations because it would increase traffic on the park road or require another access route. Federal lands within the park and preserve have been withdrawn from additional mineral location, entry, and patent under

[113] This section was largely superseded by the decision in Cumulative Impacts of *Mining Environmental Impact Statement* (1990). This document called for acquisition of all patented and valid unpatented mining claims from willing sellers. Subsequently, all but 113 acres of patented claims and 118 acres of unpatented claims have been acquired (these are depicted on Maps 11 and 12). These totals do not include private inholdings acquired through other federal land staking programs such homesites or trade and manufacturing sites. The EIS also provided for interim management of mining operations, but no such activities have taken place on the remaining claims since 1990.

the United States mining laws, subject to valid existing rights. The 464 recorded placer and lode mining claims (patented and unpatented) encompass an estimated 12,620 acres within Denali National Park and Preserve. Of this total the 39 patented claims occupy approximately 667 acres. Current mineral development activity on existing claims in the Kantishna Hills includes placer mining of gold and silver and limited small scale lode mining of silver, gold, and antimony. The current level of mineral development is described in detail in the Final Environmental Impact Statement, Kantishna Hills/ Dunkle Mine Study prepared for the Alaska Land Use Council by an interagency work group (USDI 1984). [114]

The patented and unpatented claims may continue to operate, subject to federal mineral management regulations (36 CFR 9A). Mine operators are required to submit plans of operations (36 CFR 9.9) which, among other things, must describe how the operation will comply with federal, state, and local laws and minimize impacts on park resources. ANILCA (section 1110(b)) guarantees adequate and feasible access to valid mining claims within the park. Access to the Kantishna Hills mining claims will continue to be provided by the existing park road. The estimated 1983 mining related traffic on the park road was 270 round trips per month, and it is assumed that this level of traffic will continue. [115]

Lode and placer mining operations may adversely affect park values such as water quality, fisheries, and wildlife, and they require continuing federal and state investigation and cooperative management efforts.

The Clean Water Act (section 402) requires an Environmental Protection Agency wastewater discharge permit for each mining operation. Ordinarily, states certify this permit, but in Alaska the Department of Environmental Conservation (ADEC) has waived this certification process and enforces the state's own water quality standards, which are more restrictive than the EPA standards. ADEC field personnel have monitored mining operations to evaluate turbidity, sediment, heavy metal, and settleable solid levels in mine effluent, suggested ways miners can lessen impacts on water quality, and sought voluntary compliance with water quality standards. The park staff is cooperating with ADEC and is conducting research in Kantishna on mining effects on fisheries and water quality. Currently, the National Park Service requires mine operators to use effective settling ponds wherever an operation would discharge wastewater to receiving streams. This requirement improves compliance with applicable water quality standards. Recirculation of mine process waters in conjunction with settling ponds is not currently required.

Denali's "Resource Management Plan" proposes a cooperative federal/state program to coordinate mining related research and to develop "the best alternative technology economically achievable" and associated compliance strategies. Such pooling of agency resources could avoid research duplication and would simplify procedures by establishing a lead agency for impact analysis and enforcement.

The National Park Service and the University of Alaska, Fairbanks, are currently renegotiating their agreement to jointly study the Stampede Mine area for environmentally acceptable mining methods and associated activities. [116] A minerals management plan and EIS discussing the cumulative effects of mining will be prepared for Denali. [117] The plan will implement the

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[114] A current inventory of mining claims in Denali is presented in Appendix L.

[115] No mining plans of operation have been approved since 1990. Since there is no active mining activity, there is presently no park road traffic related to active mining activity. However, individuals do still use road permits to access patented and unpatented mining claims in Kantishna. Private Kantishna traffic has an overall seasonal road allocation specified in the 1997 *Entrance Area and Road Corridor DCP* and described above under Transportation and Access – Park Road Management.

overall management objectives outlined in this general management plan by describing in detail the operating standards for mining operations, the reclamation standards, the NPS standards, policies, and procedure on approving or denying mining plans, and other management actions that will be employed within the park to ensure that mining activities are conducted in a manner compatible with the purposes of the unit.

The National Park Service remains concerned over possible development of patented mining properties for uses other than mining activities. Therefore a recommendation to acquire surface estates of patented properties is a component of the "Land Protection Plan."

Fire Management [118]

The National Park Service is a participant in the Tanana Minchumina interagency fire management plan, which encompasses most of the fire dependent ecosystems of Denali (as well as millions of outlying acres). The plan, which coordinates the fire management objectives of all the participating regional landowners, was completed and put into operation for the 1982 fire season. In accordance with NPS policy, the objective for Denali is to allow natural forest and tundra fires to fulfill their ecological role in vegetational succession. Under the plan, natural fires occurring in Denali will be allowed to burn unless they threaten inholdings, certain identified historic sites, or neighboring lands that are zoned for protection. Such neighboring lands include abutting native regional and village corporation lands, which are currently managed for total fire suppression.

The ability of the park staff to accurately predict fire behavior is restricted by a lack of basic data regarding weather patterns, fuel types, and the effectiveness of natural barriers. The National Park Service is completing a comprehensive fire history and needs to more thoroughly map park vegetation in an effort to develop fire prescriptions for Denali's fire prone zones. In addition to the fire weather stations established at park headquarters and at Wonder Lake in 1981, the Alaska Fire Service has installed one automatic fire weather station at a remote location, and the park plans to install two more. With more accurate fire prescriptions in the future, the park staff can allow natural fires to fulfill their ecological role to the greatest extent possible, while simultaneously being prepared to protect life and property as required in the Tanana Minchumina fire plan. The park is also involved in the Mat Su Borough fire plan.

Site Restoration [119]

Active revegetation with native species will be undertaken for areas within the park road corridor, at development sites, and at mining sites that have suffered vegetation damage or loss. NPS policy allows for manipulation of terrain and vegetative cover in natural zones to restore natural gradients and native vegetation on human altered lands. As part of future development projects (water, sewer, borrow pits, and other uses), native vegetation will be retained and stockpiled wherever practical for use in revegetation work. Research to refine handling techniques and acceptable time periods for stockpiling will continue, and a handbook of technical guidelines and methods will be prepared for use by the park staff. The handbook

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[116] The National Park Service acquired the mineral rights from the University of Alaska.

[117] This was completed as the *Cumulative Impacts of Mining Environmental Impact Statement* (1990).

[118] The 2004 *Fire Management Plan* provides updated and more detailed guidance for fire management at Denali.

[119] The 2001 *Environmental Assessment for Reclamation Of Mined Lands Program,* Denali National Park and Preserve, identified 1,555 acres of land disturbed by mining and mining access in the Kantishna area, and planned for reclamation and restoration of 517 acres over 10 years from 2001-2010 using techniques developed at experimental sites on Glen Creek and Slate Creek.

will cover erosion potentials, revegetation time frames, and specific treatments for all the major soil and vegetation types in the park

Air Quality Management

The 1977 amendments to the Clean Air Act (42 USC 7401 et seq.) designated the Denali National Park wilderness as a federal class I air quality area. The 1980 additions to the park and preserve are class II airsheds. [120] At the present time air quality in the park is considered excellent. The park and preserve will be managed to achieve the highest attainable air quality levels and visibility standards consistent with the applicable Clean Air Act designations and the mandates specified by ANILCA and the NPS Organic Act. The park staff will update the equipment at the existing monitoring sites (the National Atmospheric Deposition Program monitoring station at the park headquarters and two vista points), and they will conduct a technical review to determine the need for additional stations at other locations to ensure that resource values are not impaired.

Cultural Resources

The National Park Service will provide for the identification, preservation, protection, and interpretation of all significant cultural resources through adequate research and programming in accordance with NPS policy and guidelines. No undertakings resulting in the destruction or loss of known cultural resources are proposed in this plan.

The identification and treatment of the park's prehistoric and historic resources is one of the long range goals of park management. Specific actions for accomplishing this objective are described in the park's "Cultural Resource Management Plan," which is updated yearly, or as necessary, to reflect changing preservation needs and management priorities. The plan is available for review by the public, and any major changes in the direction, philosophy, or goals described by this "General Management Plan" will be subject to public involvement. [121]

There are currently about 100 historic and prehistoric sites recorded in the park. [122] The cultural resource data are incomplete. The National Park Service has sponsored limited site and critical area resource studies (studies of the Kantishna Hills and Dunkle Mine areas, for example); however, little of the land within the park has been closely examined for prehistoric and historic resources. Some of the land additions made to the park in 1980 have been subject to reconnaissance studies, but the presence and significance of cultural resources in that area are not well established. [123] The historic period is briefly chronicled in a number of publications and topical/anecdotal writings, most of which rely heavily upon the works of former park ranger and superintendent Grant Pearson. [124] Currently the only resource in the park listed on the National Register of Historic Places is the Teklanika archeological district. The park headquarters district and dog kennels have been evaluated by park and regional staffs and will be nominated to the National Register. [125]

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[120] The 1990 Clean Air Act amendments extended the class I designation to the entire park and preserve (42 USC 7472). Current information regarding air quality monitoring in Denali can be found in the Air Quality Monitoring Protocol for Denali National Park and Preserve, Alaska, a document which is regularly updated through the NPS Inventory and Monitoring Program.

[121] Denali does not maintain a stand-alone *Cultural Resource Management Plan*. Cultural resources planning was included in the 1998 *Resource Management Plan* and will be included in the *Resource Stewardship Strategy*.

[122] By 2005, the number of known historic and prehistoric cultural sites had grown to 257.

[123] Since this language was written, there has been publication two documents highlighting the prehistoric and historic resources of the park including the *Archeological Overview and Assessment* (1991) and a study entitled *Cultural Resource Management, Denali National Park and Preserve, Alaska* (2001).

In order to more completely document the presence of cultural resources in the park, an inventory will be undertaken by a multidisciplinary team of archeologists, historical architects, and historians. The park will be inventoried in geographic segments over a four year period to document the presence of cultural resources. [126] The reports resulting from the survey will identify and prioritize sites for which actions are necessary. Sites will be recorded, base maps will be produced, resources will be professionally evaluated for eligibility for the National Register of Historic Places and the park's List of Classified Structures (LCS), and preservation treatment plans will be prepared.

Resources listed on the National Register and the LCS will be provided the protection and interpretation afforded to such listed properties. Potential LCS structures will be further evaluated for adaptive and interpretive uses. [127]

Until such time as native land selections are complete, the National Park Service will protect, preserve, and manage all native historic sites identified under the provisions of section 14(h) of the Alaska Native Claims Settlement Act of 1971 as properties eligible to the National Register. The National Park Service will encourage the owners of nonfederal historic properties within the park to nominate them to the National Register, and it will provide technical assistance and advice in proper care and treatment of such properties.

A historic resource study will build upon the initial inventory. This study will describe the obvious and more subdued themes of the history of Denali. The initial themes that have been identified are Russian efforts at mapping and exploration of the interior, American exploration and surveying, mountaineering, gold mining, and the building of the Alaska Railroad. The current park administrative history will be expanded to incorporate the story of park developments since 1953. [128]

A preservation maintenance program will be developed to guide the park staff in performing routine maintenance on structures, equipment, and artifacts.

The assembled cultural resource information, including a cultural resource base map, will be used for interpretation of the cultural resources for the public. Interpretation will also make visitors aware of the fragile nature of many of the cultural resources and will alert visitors to the protected status of the resources. Use of information for interpretive purposes will be preceded by consultation with any affected native group.

Development proposals that relate to cultural resources will reflect a sensitivity to the preservation of the cultural scene through compatible and complementary design. All developments

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[124] Many other books have been independently published over the past 10-15 years relying on primary sources other than Pearson.

[125] As of 2006, National Register listed structures and sites include most of the park's patrol cabins (Lower Windy, Upper Windy, Riley, Lower Savage, Sanctuary, Igloo, Sushana, East Fork, Lower East Fork, Upper Toklat, Pearson, Lower Toklat, Thorofare, Moose Creek), the Headquarters Historic District, and two Teklanika River-area archaeological sites. Structures and sites determined eligible but which are not listed include the Wonder Lake Ranger Station, C-Camp Recreation Hall, Eielson Visitor Center site, Kantishna Roadhouse, Fannie Quigley Residence, Busia Cabin, Banjo Mill, Upper Caribou Creek Historic Complex, Glacier City, Stampede Mine, and two additional archaeological sites (MMK-027 and MMK-029).

[126] This action was completed in part as *The Quest for Gold: An Overview of the NPS Cultural Resource Mining Inventory and Monitoring Program* (2000).

[127] There are 143 sites on the LCS for Denali.

[128] In 1991 NPS historian William E. Brown completed a historic resource study of the park through the passage of ANILCA entitled *A History of the Denali-Mount McKinley Region, Alaska*. It was later distributed by the Alaska Natural History Association under the title *Denali: Symbol of the Alaskan Wild*. NPS Alaska Region historian Frank Norris is presently working on a complete administrative history of the park.

with potential for ground disturbance will be preceded by archeological surveys and clearances. Native groups will be consulted in order to avoid impacts upon traditional or sacred sites. Projects will be designed to avoid impacts or to have minimal effects on cultural resources.

Archeological Sites

Limited archeological surveys have been conducted in scattered locations throughout the park and preserve. The majority of the surveys took place in the early 1960s and were conducted under contracts by the University of Alaska (Traganza 1964; Morgan 1965; West 1965). The results were meager, and additional archeological work did not resume until the late 1970s, when clearance was needed for the construction of a power line south along the Nenana River valley road to park headquarters. Recent surveys (NPS, Davis 1980) significantly contributed to the knowledge of prehistory and to the identification of archeological sites of the area, but Denali still lacks a systematic parkwide archeological survey and overview. An archeological overview will be developed by first identifying all significant archeological sites and then conducting selective archeological investigations in typical, stable environment areas (such as ridgetops) to develop a comprehensive understanding of the prehistory of Denali. [129]

The protection of archeological sites and districts will include permanently marking sites; monitoring selected sites to determine continuing natural and human impacts; conducting test excavations of selected sites to evaluate them and to plan further preservation actions; gathering data to determine significance for National Register eligibility; and recovering data at sites that could be affected by development, use, or natural destructive forces.

All data recovery, such as controlled surface collection and excavation, will be designed to obtain the most information with the least destruction of archeological resources. When excavation is made necessary by development, it will be programmed in timely advance of construction (not less than one fiscal year).

Surface collection will be undertaken to professionally record and preserve artifacts that are potentially subject to adverse impacts because of vandalism or proposed development actions. This surface collection will be conducted only by professional archeologists meeting professional standards.

Historic Structures

As a general policy historic structures and sites, such as native villages, historic cabins, or mining complexes, will not be reconstructed. Visitor understanding will be gained through other interpretive techniques.

When preservation or restoration of existing structures is specified, the intent will be to preserve existing original work and to maintain it by compatible repair or replacement of deteriorated fabric. New work on such structures, when required for maintenance purposes, will conform to the building's original character and be undertaken only when it can be satisfactorily documented. When restoration is not possible, the elements being replaced will be duplicated.

Certain structures may not merit preservation because of minimal significance, advanced deterioration, or excessive costs. These structures will be allowed to deteriorate naturally, with

[129] *An Archeological Survey to Identify High Potential Areas* is taking place from 2005-2009. their sites eventually

reverting to a natural condition. Some removal of hazardous elements may be necessary for safety and to avoid an attractive nuisance, particularly around abandoned mining sites. Park users will be alerted to the potential hazards associated with these structures, which do have value as "discovery" sites.

Historic archeology for the purpose of uncovering all available details and increasing knowledge of historic structures plays a significant role in the restoration and reconstruction of historic sites. Historic archeological investigations will be as complete as possible, and archeological deposits will be clearly identified. Any actions affecting these deposits will be designed for minimal impact.

Contemporary Native American Concerns

The National Park Service will ensure the preservation of resources associated with native peoples whose cultural memory, traditions, and lives are closely associated with the park and its general vicinity. [130]

The ongoing identification of areas of sacred and traditional importance to local native peoples will be continued by professional archeologists and anthropologists. As new information is obtained, it will be added to the confidential inventory of these sites. Measures will be taken to ensure that mutually acceptable methods of protection and preservation are adopted, in conformance with NPS management policies and legislation.

The National Park Service will encourage active participation of local native groups in developing methods of interpreting native American culture.

Research Permits

All NPS and external research will require a research permit that will be granted only if the parameters of the project meet the management area standards in the location(s) where the project is proposed. Research and resource management activities of the Alaska Department of Fish and Game will require advance consultation under the Master Memorandum of Understanding between the Department of Fish and Game and the National Park Service (see Appendix G).

[130] *A Native Place Names Map* (1999) and an *Ethnographic Overview and Assessment* (2001) have been published for Denali.

Park Operations and Management

NPS Operations

Major changes in park operations under this plan will include developing a centralized visitor services and interpretive center area and replacing concessioner-operated facilities in the hotel area with an environmental education and science facility. These two changes in the entrance area will enable the National Park Service to provide a full range of interpretive and educational opportunities.

Road maintenance activities will increase significantly for several years until backlogged repairs were completed.

Other major changes to park operations will include the following:

- expanded rest area, campground, and trail maintenance programs
- entrance station operations, which will provide a new opportunity for visitor orientation and information as well as more efficient fee collection
- increased patrols and bear management activities along trails and in backcountry campgrounds
- additional resource monitoring and revegetation projects

To establish greater accountability and minimize impact to wilderness resource values throughout the park and preserve, all NPS-authorized administrative and research activity throughout the entire park and preserve backcountry will be subject to the minimum requirement/minimum tool process. When the minimum requirement/minimum tool is used, the potential disruption of wilderness character and the physical resource will be considered and given more weight than economic efficiency and convenience. Appendix K provides a sample tool for determining the minimum requirement/minimum tool.

Administrative Facilities

The park headquarters will remain in its present location. The visitor use proposals will require establishing a district operation on the south side of Denali. The facilities needed for management, operations, maintenance, etc., on the south side will be constructed separate from the activity center.

The following actions could be implemented during the next 15–20 years. However, the developments outlined in previous sections that directly serve park visitors and protect resources are a higher priority. In the interim, park management will expand administrative space and consolidate functions as practicable to improve overall operational efficiency.

The National Park Service will construct additional administrative space in the headquarters area by replacing the "Outback" building that houses dispatch, the library, and ANHA offices with a new 5,000-square-foot building. This building will be designed to be architecturally compatible with existing rustic buildings in the headquarters area. When completed it will include NPS offices, ANHA office space, and the main park library. Additional parking will

be constructed northeast of the kennels at the headquarters area for up to 20 NPS employee vehicles.

Maintenance functions will be consolidated at the auto shop area in a new 8,000-square-foot building. The vacated space (3,000 square feet) will be rehabilitated for other administrative uses. [131] The National Park Service will rehabilitate all the buildings and the landscape of the Headquarters Historic District. [132] Interpretation division offices, including a multimedia workroom, will be located within space vacated by maintenance and ranger operations or in part of the new 5,000-square-foot building mentioned above. Administration, concessions, and resource management offices will be similarly located, consolidating functions as much as possible. Additional resource management facilities such as a laboratory and curatorial storage will be located in the headquarters area either by constructing a new building or by adaptive use of vacated maintenance space. Greenhouse facilities to support revegetation projects in the park will be developed in cooperation with the University of Alaska-Fairbanks, if practicable. Otherwise, a greenhouse could be constructed near the headquarters area. A parking area for up to 20 employees will be constructed northeast of the dog kennels.

Additional seasonal office space for visitor services staff will be constructed as part of the new visitor services center. Seasonal office space for interpretation division employees will be available in the interpretive and discovery center and at the environmental education and science facility. National Biological Service office space will also be provided for in the environmental education and science facility area.

The National Park Service will relocate and consolidate some functions such as research and administration in Healy and Fairbanks to the extent practicable.

A new EMS/fire station (3,230 square feet) will be constructed in the auto shop area with East District protection offices consolidated there. [133] The dispatch office will also be located in this building. An ANHA warehouse of up to 4,000 square feet will be constructed near or adjacent to the EMS/fire station or near the environmental education and science center on a previously disturbed site. Interim storage for the Alaska Natural History Association will be met with temporary structures within the development subzones. [134]

In the park interior, the National Park Service will upgrade existing administrative space at Toklat, Eielson, and Wonder Lake. At the Toklat road camp, upgrades will include a rebuilt maintenance building of approximately 7,000 square feet. Sheetpile will be installed to protect the facilities there from river erosion. Any upgrades to facilities will also include measures to reduce electrical demand. On the west end, the Wonder Lake ranger station will be rehabilitated. [135]

Employee Housing

The National Park Service will retain the six-plex apartment building for permanent housing. Up to six additional garages in three separate buildings will be constructed in the headquarters area for housing units that do not currently have them. [136]

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[131] These actions have been completed. The new maintenance building is 10,000 square feet.

[132] This project is underway and several buildings have been rehabilitated. The Headquarters building, the Kennels building, and two residential buildings remain to be completed as of 2006.

[133] The 2006 *C-Camp Improvements Environmental Assessment* provided for construction of the EMS facility on the east side of the C-Camp access road with a separate, parallel road for accessing the new building as well as the auto shop and maintenance facilities. This EA also provide for utility upgrades, an extension of the maintenance pad to the west with new parking and a trails office, and an upgrade of seasonal housing facilities.

Replace inadequate and below standard housing such as trailers at C-Camp and Toklat. C-Camp housing for seasonal and temporary employees will be improved and upgraded for year-round use with no net loss in total beds. The central showerhouse and laundry facility will be remodeled. In the concessioner housing area, 100 of the 195 beds will be converted for NPS use after hotel closing; 50 of the 100 beds will be allocated to the environmental education facility; and 44 will be for NPS, research staff, and ANHA housing. [139]

In the park interior, seasonal employee housing at Sanctuary, Igloo Creek, East Fork, and Toklat will be renovated. Housing upgrades at Toklat will include measures to reduce electrical demand. [140] At Wonder Lake, the National Park Service will upgrade seasonal housing and provide for two additional NPS staff. [141]

Utility Systems

Upgrade utilities in the entrance and headquarters area, including upgrade of electrical and water systems and rehabilitation of sewer systems. [142]

The removal or discard of human waste from administrative sites and visitor use sites within the park and preserve will be accomplished with applicable regulations of the Alaska Department of Environmental Conservation and the Environmental Protection Agency.

The National Park Service will implement the following projects to upgrade electricity, water, sewer, and communications systems in the frontcountry:

- Expand utility systems in the entrance area to provide for year-round use of portions of the environmental education and science center and the visitor services building. This will include installation of a septic tank and leachfield and development of a water system. [143]

- Replace C-Camp and headquarters leachfields with one package sewage treatment plant (25,000 gallons per day capacity).

- Expand utility systems in the headquarters area to serve additional structures such as the new office building and the comfort station in the kennels area. [144]

- Expand the existing dump station near the Riley Creek campground to improve traffic circulation. A second two-port island will be added and connected to existing water and sewer systems. [145]

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[134] Storage for the Alaska Natural History Association was included in an expansion of the Auto Shop.

[135] The ranger station rehabilitation is complete.

[136] Funds have been requested to replace the sixplex apartment with three duplexes.

[137] The trailers have been removed.

[138] The 2006 *C-Camp Improvements Environmental Assessment* calls for an additional showerhouse for C-Camp. Remodel of existing showerhouse is complete.

[139] Reallocation of concessionaire housing has occurred, and the dormitory has been closed.

[140] Electric ranges have been removed from Toklat housing and energy efficient fixtures are utilized.

[141] A new showerhouse was built for the Wonder Lake Ranger Station.

[142] There have been some upgrades of sewer collection, water, electric in entrance area. There was maintenance replacement of failing electric infrastructure at Headquarters in 2003, but this was not a system upgrade.

- Upgrade water systems at Sanctuary and Igloo Campgrounds by installing dish washing stations and grey water disposal systems (one at each campground). A 5,000-gallon water storage tank will be installed at each campground with a photovoltaic energy system to power the pump.

- Construct an onsite waste water disposal system for the proposed Toklat rest area. [146]

- Upgrade the electrical system serving Toklat, incorporating measures to reduce electrical demand.

- Upgrade the Wonder Lake ranger station water system. [147]

- Provide minimal sewage facilities (pit toilets) for the Yanert Overlook and Kantishna area backpacker campgrounds.

Administrative Camps

The existing patrol structure and administrative camps on Mount McKinley will be retained. There will be no additional administrative camps in the backcountry.

Staffing/Personnel

The National Park Service will continue to carry out the provisions of section 1308 of ANILCA which are concerned with the hiring of local residents. Furthermore, the Park Service will work to advance these employees into permanent staff positions as they obtain the necessary experience. This program recognizes the unique lifestyle of Alaska bush residents and is designed to use a wide variety of local skills and knowledge for employees working in seasonal and year round jobs.

Aviation

Within three years, the National Park Service will complete a plan for administrative and research use of aircraft in the wilderness, park additions, and preserve, which includes goals and specific objectives for minimizing helicopter and airplane use; specifies a methodology for accounting for NPS administrative and research air traffic; and provides criteria for determining when the use of aircraft meets the minimum requirement/minimum tool test.

Other

The National Park Service will seek cooperative agreements with several agencies for the purpose of undertaking mutually beneficial programs. Typical examples of agreements are listed below.

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[143] This project was completed with construction of the Murie Science and Learning Center in 2005.

[144] The Kennels was provided with an SST rather than expanding the Headquarters utility system to that area.

[145] This project was completed as part of the Riley Creek Mercantile in 2001.

[146] The rest area was provided with SST's instead, completed as part of the permanent Toklat Rest Stop in 2005. See the *Environmental Assessment for the Construction of a New Eielson Visitor Center and Permanent Toklat Rest Stop* (2004).

[147] Project completed. The intake was moved to the lake and the system was converted to photovoltaic power.

an agreement for cooperative management with the state of Alaska regarding submerged lands

an agreement for cooperative management with the state of Alaska regarding water rights

an agreement for cooperative management with the state of Alaska regarding public use on waterways in the park (to be pursued only if case by case resolution of management issues proves unacceptable to the National Park Service and the state)

an agreement for cooperative management with regional and village native corporations for management of 17(b) easements should any be created by the BLM and subsequently transferred to NPS management

Boundary Changes

The National Park Service will seek a land exchange with the State of Alaska (similar to a previously proposed exchange of land) that will realign the park boundary with the Tokositna, Coffee, and Ruth Rivers (see Map 17). As a result of the exchange, approximately 3,229 acres of Denali State Park land will be transferred to Denali National Park and Preserve, and approximately 2,822 acres of Denali National Park and Preserve land will be transferred to Denali State Park. Land to be transferred to the State of Alaska surrounds approximately 137 acres of privately owned inholdings.

An additional adjustment will be proposed for the area immediately north of Dutch Creek to provide a boundary that is more identifiable in the field and out of the potential placer mining in that floodplain. Completion of the exchanges and determination of actual boundaries and acreage will depend on the outcome of negotiations with the State of Alaska.

Mitigation

South Side Denali Development Concept Plan

This section describes measures that will be used to minimize the adverse effects of facility construction and later activities associated with use of the facilities. These measures will apply only in the case of actions taken as part of South Side DCP implementation; other actions taken outside of this plan or as part of other unrelated plans do not require implementation of these mitigating measures. In some cases, as indicated, mitigation will apply only for federal actions or for state or borough actions. No proposals will be implemented unless, and until, necessary mitigating measures could be taken. Unless otherwise noted, mitigating measures will apply regardless of whether the proposed actions take place on state, federal, borough, or Native corporation lands.

All construction will be restricted to the minimum area required. During all phases of construction a project supervisor will review the work to ensure that work methods minimize impacts on lands near the construction site and that mitigating measures written into the contract are followed.

Required Research
Studies on the natural and cultural resources and human uses of the planning area will be conducted in advance of south side development. Studies will have the objectives of providing broad spectrum resource data useful in environmental analyses and in addressing human use issues; providing site-specific resource information for facility design and siting; and filling voids in existing information, particularly as it relates to sensitive species or ecosystem elements. Specific tasks will probably include the following:

- aerial photography and resource mapping
- moose survey(s)
- grizzly and black bear studies
- wolf monitoring
- swan and other waterfowl surveys
- raptor nest documentation
- weather station operation
- fish population surveys
- existing human use and impact analyses
- backcountry management analysis
- vegetation inventory
- archeological, ethnographic, and historic
- resource surveys

Site-specific tasks will include soils mapping and boring, wetland delineation, and wildlife and vegetation surveys.

Wildlife
To minimize wildlife impacts, facilities will be sited to avoid the following sensitive wildlife habitats or activities:

- wildlife travel areas or corridors
- feeding and resting areas
- bear denning sites
- moose winter range
- moose calving areas
- caribou calving grounds
- Dall sheep winter and spring lambing range
- wolf activity or denning sites
- trumpeter swan and Tule greater white-fronted goose nesting, brood-rearing, or molting areas
- raptor nest sites

In trumpeter swan nesting areas, all land use activities that will disturb nesting swans or detrimentally alter the nesting habitat will be avoided to the extent feasible and prudent. When avoidance is not feasible and prudent, land use activities will be conducted to minimize disturbance to nesting swans or minimize detrimental alteration of habitat. Activities that will damage swan nesting habitat or cause visual or noise disturbance should be restricted or prohibited from April 1 through August 31 within at least .25 mile of swan nesting or staging ponds, marshes, or lakes that are actively being used by swans or for which there is a documented history of use. Particular activities may be restricted or prohibited in a wider area if their potential level of damage or disturbance warrants doing so.

Measures will be taken to reduce the potential for bear/human encounters. Visitors will be educated on the proper behavior when recreating in bear country. Availability and use of bear-proof garbage containers will be required around visitor centers, picnic areas, trails, interpretive waysides, and camping facilities. Backcountry users will be required to carry bear-resistant food containers on NPS lands and may be required to do so on state park lands. Trails or trail sections may be closed temporarily or during certain seasons to protect wildlife.

To further reduce the chance of bear/human encounters, trail segments in high-density bear habitat will be kept as straight as possible, maximizing sight distances, and brushy vegetation will be cleared from trail edges and in areas around other visitor facilities. Where linear trail sections are not appropriate (e.g., due to an area being too wet to allow for a straight route), less densely vegetated sites will be selected. Areas of highly concentrated bear use such as salmon spawning streams will be avoided.

Wetlands

All facilities will be sited to avoid wetlands, or if that is not practical, to otherwise comply with Executive Order 11990 ("Protection of Wetlands") and regulations of the Clean Water Act. In areas with sensitive natural resources, such as wetlands, muskeg, or streambanks, increased caution will be exercised to protect these resources from damage caused by construction equipment, erosion, siltation, and other activities with the potential to affect these resources. Measures will be taken to keep fill material from escaping work areas especially near streams or natural drainages.

Vegetation

For NPS lands or actions involving NPS funds, development sites will be surveyed by a qualified botanist for possible rare plant species. Proposed routes will be relocated or possibly eliminated from further consideration based on these surveys. Vegetation removed during construction will be salvaged to the extent possible for use in restoring areas disturbed by construction.

Whenever possible, trees will be retained and protected from construction-related damage. Trees destroyed during construction will be used for construction material or fuel, or will be disposed of outside park areas by the contractor if feasible.

A disturbed area revegetation plan will be formulated that will require the use of native species. Specifications for soil preparation, native plant/seed mixes, fertilizer, and mulching will be provided for all areas disturbed by construction activities. A monitoring plan will be developed and implemented to ensure revegetation is successful, plantings are maintained, and unsuccessful plant materials are replaced.

Two aspects of trail development will reduce the impacts on vegetation. First, careful route selection will involve at least three steps: (1) mapping general route alternatives and major control points such as cliffs and bogs, (2) close-hover helicopter overflights of route alternatives as necessary to select the best option based on assessment of terrain characteristics, control points, and general route feasibility, and (3) ground surveys to refine the trail route where necessary because of terrain or resource concerns. Trails will also be designed and maintained to discourage social (informal, user created) trail development. Trails will be built along the easiest, most conveniently located routes to specific attractions given the natural terrain. The number of people expected to use the trail will also be considered, and the size of the trail adjusted accordingly to reduce the need for people to step off-trail to let others pass. Various

types of barricades could also be used to keep people on designated trails and, thus, reduce the potential for social trails.

The second aspect of trail development needed to reduce vegetative impacts is a commitment to annual maintenance of the trail system. Annual maintenance will reduce the potential for trail deterioration and additional vegetation loss from erosion, groundwater disturbance, trail widening, and slope failure. Maintenance reviews could also determine whether trail modifications are necessary to reduce the number of social trails that have developed or may develop.

For state lands, development will be conducted to minimize disturbance to native vegetation. All disturbed areas will be revegetated unless the landowner specifically requests the area be prepared for natural regeneration of native species. In most cases, revegetation will include native plants. Revegetation plans will be developed in sensitive areas such as wetlands and streambanks and will include monitoring for at least one full growing season. In areas of known rare plant species (i.e., listed as threatened or endangered), development will be avoided if practicable. Individual land managers may apply additional requirements.

Water Quality And Surface Water Resources

Best management practices will be used during all construction to minimize potential erosion and sedimentation. These practices include measures listed under the subsection on soils below to reduce dust and erosion, and measures listed under the previous subsection on vegetation to restore native plants in areas exposed during construction. Silt fences and settling ponds will also be in place during construction to protect water quality. Proper siting and treatment of human wastes will occur to ensure levels of nutrients entering the water are minimal.

Soils

A program to reduce dust and soil loss will be instituted, as appropriate, for all excavation, grading, construction, and other dust-generating and soil-disturbing activities. This program could include (1) sprinkling unpaved construction areas with water to reduce fugitive dust emissions and covering or seeding disturbed areas, as appropriate; (2) imposing speed limits for construction vehicles in unpaved areas; (3) covering trucks hauling dirt and debris; and (4) salvage and reuse of native soils.

Where feasible, local fill material, preferably from the original site, will be used for trail construction activities. Material excavated during trail construction will generally be used as fill in other trail segments or construction areas.

Cultural Resources

None of the lands on which the actions will be undertaken has been surveyed for archeological resources. Because archeological sites and features tend to be relatively discrete, it is believed that most of the actions could be designed to avoid archeological resources. During early design phases, the sites of proposed nature trails, visitor centers, or roadside exhibits will be surveyed to determine the presence, extent, and significance of any previously unknown archeological resources. Every effort will be made to avoid significant resources. **For federal actions,** if avoidance was not feasible, mitigating measures will be developed according to 36 CFR 800, in consultation with the Alaska State Historic Preservation Office, the Advisory Council on Historic Preservation, Native American groups, and other interested parties.

If any previously unknown archeological remains are discovered during construction, all work will be halted in the discovery area until the significance of the finding could be determined by cultural resource staff. If protection was not feasible, appropriate mitigation of adverse impacts on those resources will be determined as outlined above. **For state actions,** project planning must comply with state statutes that prohibit the excavation, damage, and removal of archeological and historic resources located on state land without proper permits. All projects should be coordinated through the Alaska Office of History and Archeology. For borough actions, as a certified local government, the Matanuska-Susitna Borough will comply with local preservation ordinances and state statutes. If any proposed development will involve direct modification, preservation, or use of a structure or district on or eligible for the National Register of Historic Places, such development will be carried out according to the 1992 *Secretary of the Interior's Standards and Guidelines for Historic Preservation Projects*.

Historically, the south side area fell within the Valdez Creek Mining District. Although there is no additional site survey information to include at this time and no anticipated surveys at or near the south side, there is strong geographical evidence to indicate that historic mining resources may exist throughout the region. In defining the mining context for the area, attention should be given to the geographic place names that allude to mining activities. Equally important will be the understanding of placer mining landscape features that could exist on tributaries and creeks in the area. Isolated features including sluice boxes, dams, piping, and tent frames could exist along placer creeks. Mining landscape features including fill, changes to stream coursing, and tailings could also be found. Survey of these types of features are necessary when the final sites for development are determined. Historic resources associated with parallel activities to mining, including hunting, fishing, and trapping will also require consideration. Many miners pursued these activities to raise cash and supplement sideline mining ventures. Associated property types for these historic land uses can be included in later plans or once the sites for development are determined.

Sustainable Design Principles And Aesthetics

The visitor centers and other facilities will be simple in function, reflecting the wild setting. While detailed design solutions will emerge through subsequent analyses and planning, solutions will consider the effects of scale, natural/rustic appearance, materials, color, texture, continuity, furniture, and other issues related to the built environment that will contribute to the visitor experience and minimize visual and natural resource impacts.
Where federal funding is used, all appropriate state-of-the-art water and energy conservation technologies, sustainable practices, and materials recycling will be incorporated into the design of the proposed facilities according to NPS policy on sustainable development practices.

Implementation

Frontcountry

The most important objective of this development concept plan is to outline actions that improve the visitor experience and resource protection in Denali and that can be implemented immediately upon plan approval. Another objective is to provide comprehensive, general guidance for development in and management of the entrance area and road corridor for the next 15–20 years or more.

Funding is the ultimate determinant of when proposed developments, programs, and staffing additions will be implemented. Because of dwindling federal resources, the National Park Service is interested in partnerships to develop cost-effective solutions for carrying out legislated responsibilities. The purpose of this development concept plan is to determine the types of actions necessary and the locations for proposed development, leaving funding options open.

Phasing

Priorities for implementing actions under the proposed plan have been developed and are outlined in the following table. This list is preliminary and may be amended in the future.

Definitions of priorities include:

1 = highest priority: Highest priority projects include those related to immediate health and safety concerns and protection of threatened and endangered resources. Also included in this category are major actions designed to enhance the visitor experience and resource protection in the frontcountry and management actions that can be implemented without additional funding, such as regulatory changes.

2 = second highest priority: Second level priorities include essential services and NPS functions and actions that are the second phase of a high priority project. This priority level also includes major actions that will enhance the visitor experience and resource protection in the frontcountry but will require additional site-specific environmental compliance.

3 = lowest priority: Lower priority projects encompass the later phases of projects initiated at higher priority levels, smaller projects that contribute to an improved visitor experience and resource protection, and projects that require substantial follow-up site planning and compliance.

Cost Estimates for New Development

The cost for new high priority (level 1) development in the proposed plan will be approximately $19 million (see itemized cost estimate in replacement table E-4, appendix E errata sheet in the *Final Entrance Area and Road Corridor DCP).*

Table 6: Entrance Area and Road Corridor DCP Implementation Priorities

Priority	Description of Actions
Level 1: Highest Priority	**Road Use:** Implement Phase 1 of traffic limits affecting buses and private vehicles (including Kantishna traffic); construct bicycle/foot trail connecting Nenana River canyon to visitor services center area. **Road Maintenance:** Establish additional gravel sources at Teklanika River and Kantishna; complete road repairs addressing safety issues; expand experimental use of dust palliatives and particle binders. **General Development:** Close park hotel; provide expanded interpretive opportunities at the Savage cabin; construct rest areas and trail system in Savage River and Toklat areas; construct new visitor services building and expand visitor access center for interpretation; construct Triple Lakes trail; construct short loop trail at Primrose and river access trail at Teklanika; construct EMS/fire station in auto shop area; rehabilitate entrance area utilities; install package sewage treatment plant for C-Camp and headquarters; add bypass to Kantishna airstrip. **Park Operations:** Acquire development rights and/or property in Kantishna.
Level 2: Second Highest Priority	**Visitor Use:** Expand interpretive information and programs in entrance area. **Road Use:** Implement Phase 2 of changes to traffic limits. **Road Maintenance:** Make road repairs addressing high priority structural failures. **General Development:** Close McKinley Park airstrip; construct additional campsites at the Riley Creek campground; construct Yanert Overlook campground and Nenana River trail; construct environmental education and science facility; construct new camper convenience center; construct entrance station; construct cultural resources trail; install wayside exhibits at all rest areas; replace Eielson Visitor Center; reconfigure sled dog demonstration trail at headquarters; construct trails at north end of Wonder Lake; upgrade C-Camp; convert some concessioner housing in former hotel area to NPS use; consolidate maintenance functions in auto shop area and remodel vacated space for administrative use; provide additional visitor opportunities in Kantishna (guiding, rehabilitate the Juahola cabin).
Level 3: Lowest Priority	**Road Use:** Implement Phase 3 of changes to traffic limits. **Visitor Use:** Provide additional interpretive services in the Kantishna area. **Road Maintenance:** Make road repairs addressing second highest priority failures; construct gravel shoulders along sections of paved road. **General Development:** Construct Kantishna area campground and campsites; replace Denali National Park Post Office; construct new picnic areas; construct new comfort station for kennels and headquarters visitors; upgrade existing trail system in entrance area; construct loop trail north of Eielson Visitor Center; upgrade/relocate McKinley Bar trail; upgrade employee housing and administrative space in park interior; construct additional administrative space in headquarters area; expand entrance area dump station; upgrade water systems and electrical systems in park interior.

South Denali [148]

A Denali South Side Plan Implementation Partnership will be formally established to continue the cooperative partnership approach in implementing the development concept plan. This partnership team will also serve as a monitoring group to evaluate the progress of implementation activities and associated mitigation actions and to keep these two items linked. Substantial community involvement will be a part of this plan implementation.

Pursuant to ANILCA, sections 1306 and 1307 and established 1306 implementation policy, the National Park Service will continue to be committed to giving priority to the application of Title XIII with regard to federal expenditures for visitor facilities and services.

Development should be phased in practical and achievable steps.

Critical to the implementation of this alternative will be the development of a phasing scenario based on practical and achievable steps. This phasing will allow proposed development to be implemented over time, a 15- to 20-year period, as funding becomes available for construction. Some developments could occur in 3 to 5 years; others will occur in 5 to 15 years or more. Partnerships will be explored among the state of Alaska, tourism groups, Cook Inlet Region, Inc., the Matanuska-Susitna Borough, the National Park Service, and others determined critical to plan implementation.

Determining appropriate phasing is not only important for scheduling development activities, but also is necessary to allow time for completion of needed additional plans and environmental evaluations, implementation of needed land use actions, developing additional knowledge about the resources that may be affected, and securing adequate staffing to operate the facilities.

Due to the uncertainties of funding sources and complexities of the additional road planning, this DCP/EIS does not include details of what development will be included in different phases; however, the following indicates a logical sequence of development.

Step one could include:

Conduct resource studies and additional public involvement.

Implement land management controls and mitigation actions.

Develop detailed plans for the Petersville Road upgrade, guided by the South Side DCP. Complete Petersville Road improvement environmental impact statement that will detail road design standards and a phasing scenario.

Develop plans for interpretive and recreation developments at the Tokositna site and on the George Parks Highway, coordinated with the phasing scenario developed for the road improvements. One or more project-specific environmental assessments will be prepared for this facility development.

Develop access strategy for Dunkle Hills area.

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[148] Implementation priorities were redefined in the *Final South Denali Implementation Plan* (NPS 2006e)

Step two could include:

Develop access to the Tokositna site.

Develop facilities and trails at Tokositna.

Develop George Parks Highway facilities.

Develop Chelatna Lake facilities.

Develop Dunkle Hills access.

Additional details on phasing will be developed in follow-up plans and in subsequent site-specific analyses. Determining phases and ensuring necessary follow-up work will be a key responsibility of the implementation partnership team discussed above.

Backcountry

The backcountry management plan will be implemented through regulations, step-down plans, commercial service authorizations, construction projects, and other means. Implementation actions and requirements are listed in Table 6. Public involvement and environmental compliance will be completed as necessary for all actions.

The plan will be implemented using adaptive management. Since the park recognizes the need to make decisions on the best available information, it will continue to gather new information, learn from previous efforts, and adapt the plan as necessary. The National Park Service will gather information from visitor registration and surveys, as well as from the monitoring of soundscapes, wildlife, and other resources. Adaptation and change to the plan can be expected as monitoring continues, new scientific data and information is obtained, new tools and equipment are developed, and new opportunities and circumstances arise.

An important part of adaptive management is ongoing monitoring associated with the resource and social conditions described under the Management Areas section above. The National Park Service will monitor for the general condition of the area not the exceptions. When monitoring shows that standards are exceeded or that trends indicate a risk that standards will be exceeded, the National Park Service will act to manage access and use employing the tools listed Table 4.

Another tool used in adaptive management will be the annual backcountry operational management plan, which will be implemented through existing regulations, the Superintendent's Compendium, or additional special regulations if necessary. This operational plan will provide specific guidance for the general actions authorized in the final backcountry management plan, and the guidance will be updated yearly to reflect current information and conditions. Topics addressed will include:

- Permit conditions
- Unit quotas
- Length-of-stay and other restrictions
- Closures
- Operation of registration and permit systems

Backcountry Implementation Advisory Committee	Charter an advisory committee under the Federal Advisory Committee Act (FACA) to advise the NPS on plan implementation. Subcommittees will address specific issues including monitoring, aircraft overflights, and mitigation for hiking impacts as described in the plan.
Monitoring	Develop and implement a comprehensive monitoring plan for the indicators identified by the plan. The development of the monitoring plan will take place entirely or in part in conjunction with the development of the park's Resource Stewardship Plan and the development of monitoring protocols for the Central Alaska Network's Vital Signs Monitoring Plan.
Regulations	Promulgate the following special regulations in 36 CFR 13.63: • Establish group size limits of 6 and 12 where appropriate • Establish seasonal climbing limit on Mount McKinley • Require removal of human waste at certain locations in climbing and mountaineering areas • Prohibit use of power drills for mountaineering activities throughout the park additions and preserve In addition, the NPS will document the need for management action and promulgate regulations if necessary for the following: • Required registration for overnight use or winter day use in the southern park additions east of and including the Kahiltna Glacier • Closure of sensitive locations in the Old Park to motorized access
Commercial Services	Issue prospectuses for commercial air taxi and scenic air tour glacier landing services that reflect plan provisions. Revise description for air taxi Incidental Business Permits (IBP) to reflect plan provisions, or use a Commercial Use Authorization when regulations are available. Issue prospectuses for commercial guided hiking in the Kantishna Hills that reflect plan provisions. Develop a commercial visitor service authorization for guided hiking on designated entrance area trails. Revise IBP area to produce individual maps for air taxi, guided day-hiking, guided overnight hiking, and guided mountaineering services per direction in the plan. Amend guided sport hunting operating plans to reflect approved areas.
Backcountry Operations	Obtain funding for additional patrol and visitor services staff to implement plan provisions. Develop backcountry operational plan and annual updates. Study and implement improvements to backcountry registration system, including advance registration procedure for overnight camping in the Kantishna Hills. Include a voluntary process for registering airplane landings in the Old Park. Identify and map winter corridors in the Dunkle Hills area. Purchase satellite phones and implement procedures for patrol use of phones.

Facility Development	Complete plan for Kantishna trail and backcountry campsite development. Obtain funding and construct. Plan and construct other trails identified in this plan. Add winter backcountry support facilities at Headquarters. Plan and construct Broad Pass visitor contact station. This item will require development of agency partnerships, specific definition of scope, and site selection prior to environmental compliance or other action.
Implementation Plans	Complete plan for NPS aviation management. Obtain easement for access to the Cantwell-Windy Creek 17(b) easement. As necessary, develop ancillary facilities such as trailhead and parking.
Land Exchange	Complete land exchange with the State of Alaska.

Appendix A: Backcountry (Natural Zone) Management Areas

Management Area	Purpose	Resource Conditions					Social Conditions				
		Trail & Campsite Disturbance	**Evidence of Modern Human Use** *max. encounters/day*	**Landscape Modifications** *allowed to mitigate for visitor use?*	**Litter & Human Waste** - *max.% of visitors who encounter*	**Natural Sound Disturbance**	**Encounters with People** *max. parties encountered/day*	**Encounters with Large Groups** *encounters possible?*	**Camping Density** *able to camp out of sight and sound (s&s) of others?*	**Accessibility**	**Administrative Presence**
A	Provide a diversity of opportunities for wilderness recreational activities that are relatively accessible to day-users and to those who have limited wilderness travel skills or equipment.	**Medium** occasional social trails, campsites	**Medium** 3 encounters/day	**No**	**Low** 5%	**High** max % aud/hr: 25 max #/day: 25 max dBA: 60	**High** 5 encounters/day	**Yes**	**Low** always able to camp out of s&s	**Medium**	**Medium** routine visitor contacts
B	Provide opportunities for wilderness recreational activities suitable for day-users and overnight users that are remote and require self-reliance.	**Low** few if any social trails, campsites	**Low** 1 encounter/day	**No**	**Low** 5%	**Medium** max % aud/hr: 15 max #/day: 10 max dBA: 40	**Medium** 2 encounters/day	**Yes**	**Low** always able to camp out of s&s	**Low-Medium**	**Low** occasional patrols
C	Provide opportunities for climbing and mountaineering experiences in a wilderness setting.	**Medium** occasional social trails, campsites	**Medium** 3 encounters/day	**No**	**Low** 5%	**Medium** max % aud/hr: 15 max #/day: 10 max dBA: 40	**High** 5 encounters/day	**Yes**	**Low** always able to camp out of s&s	**Low-Very Low**	**Low** occasional patrols
D	Provide opportunities for extended expeditions that are remote and require self-reliance, significant time commitment, and thorough advance planning.	**Low** few if any social trails, campsites	**Low** 1 encounter/day	**No**	**Low** 5%	**Low** max % aud/hr: 5 max #/day: 1 max dBA: 40	**Low** unlikely to encounter other parties	**No**	**Low** always able to camp out of s&s	**Low**	**Low** occasional patrols
Portal	Provide high-use airplane landing areas that provide access to remote parts of the park and preserve. Year-round or seasonal.	**N/A**	**Medium** 3 encounters/day	**No**	**Low** 5%	Same as for surrounding area, but no lower than Medium	**N/A**	**Yes**	**Medium** may have to camp in s&s during peak season	**Medium**	**Medium** routine visitor contacts
Portal - Major Landing Area	Provide high-use airplane landing areas that are suitable for both day use and expedition drop-off and pick-up. Seasonal, May-September.	**N/A**	**High** 5 encounters/day	**Yes**	**Low** 5%	**Very High** max % aud/hr: 50 max #/day: 50 max dBA: 60	**N/A**	**Yes**	**High** little or no opportunity to camp out of s&s	**High**	**Medium-High** routine visitor contacts - frequently present
Corridor	Provide high-use travel routes via ground or water that provide access to remote parts of the park and preserve. Year-round or seasonal.	**Medium** occasional social trails, campsites	**High** 5 encounters/day	**Yes**	**Low** 5%	**High** max % aud/hr: 25 max #/day: 25 max dBA: 60	**Very High** 10 encounters/day	**Yes**	**Medium** may have to camp in s&s during peak season	**Low-High**	**Medium** routine visitor contacts
Backcountry Hiker	Provide day use trails into the backcountry in areas that are accessible to many visitors. Year-round or seasonal.	**N/A**	**High** 5 encounters/day	**Yes**	**Low** 5%	**Medium** max % aud/hr: 15 max #/day: 10 max dBA: 40	**Very High** 10 encounters/day	**Yes**	**N/A** no camping allowed on trails	**High**	**High** frequently present
Ruth Glacier Special Use	Provide for high use of transportation services during the season when large numbers of day users are accessing the Ruth Amphitheater. Seasonal,	**Medium** occasional social trails, campsites	**Medium** 3 encounters/day	**No**	**Low** 5%	**Very High** max % aud/hr: 50 max #/day: 50 max dBA: 60	**High** 5 encounters/day	**Yes**	**Low** always able to camp out of s&s	**Low-Very Low**	**Medium** routine visitor contacts
Old Park											
OP1	Provide opportunities for day use and overnight wilderness recreational activities that are remote and require self-reliance in an area that has limited opportunities for motorized access.	**Medium** occasional social trails, campsites	**Low** 1 encounter/day	**No**	**Low** 5%	**Low** max % aud/hr: 5 max #/day: 1 max dBA: 40	**Medium** 2 encounters/day	**Yes**	**Low** always able to camp out of s&s	**Medium-High**	**Medium** routine visitor contacts
OP2	Provide opportunities for extended expeditions that are remote and require a high degree of self-reliance, significant time commitment, and thorough advance planning in an area that has limited opportunities for motorized access.	**Low** few if any social trails, campsites	**Low** 1 encounter/day	**No**	**Low** 5%	**Low** max % aud/hr: 5 max #/day: 1 max dBA: 40	**Low** unlikely to encounter other parties	**No**	**Low** always able to camp out of s&s	**Low**	**Low** occasional patrols
West Buttress Special Use	Provide a seasonal route to the summit of Mount McKinley that can accommodate large numbers of climbers during the primary climbing season. Seasonal, late April to mid-July.	**N/A**	**High** 5 encounters/day	**Yes**	**Low** 5%	**Low** max % aud/hr: 5 max #/day: 1 max dBA: 40	**N/A**	**Yes**	**High** little or no opportunity to camp out of s&s	**Low-Very Low**	**High** frequently present

Appendix A: Backcountry (Natural Zone) Management Areas

Resource Conditions					Social Conditions				
Trail & Campsite Disturbance	**Evidence of Modern Human Use**	**Landscape Modifications**	**Litter & Human Waste**	**Natural Sound Disturbance**	**Encounters with People**	**Encounters with Large Groups**	**Camping Density**	**Accessibility**	**Administrative Presence**
Medium Visitors notice occasional social trails, campsites, or cut or broken vegetation.	**High** Visitors have at most 5 encounters with modern equipment or landscape modifications each day of their trip.	**Yes** There may be visible mitigations for visitor use such as constructed trail segments, route markers, signs, bridges, designated campsites, food storage facilities, sanitation facilities, fixed climbing lines, or others as described or proposed by this plan.	**Low** No more than 5% of visitors encounter human waste, toilet paper, or litter in the backcountry.	**Very High** Natural sounds are often interrupted by motorized noise including loud noise. Motorized noise may be audible up to 50% of any hour, and there may be up to 50 motorized noise intrusions per day that exceed natural ambient sound. Motorized noise does not exceed 60dBA.	**Very High** Visitors commonly encounter other parties in these areas. They generally encounter 10 or fewer parties per day.	**Yes** 1 or 2 of the parties encountered may have more than 6 people.	**High** During the season of peak visitation, there is little or no opportunity for visitors to camp out of sight and sound of others. At other times of year visitors may be able to camp out of sight and sound of others.	**High** These areas are suitable for casual use and do not require extensive time commitments, specialized backcountry travel skills, advance planning, or self-reliance.	**High** Rangers are frequently present, so visitors generally have some contact with them. Visitors may occasionally encounter staff or permitted researchers involved in inventory and monitoring projects and research in some areas.
Low Visitors notice few if any signs of social trails, campsites, or cut or broken vegetation.	**Medium** Visitors have at most 3 encounters with modern equipment or landscape modifications each day of their trip.	**No** There are no visible landscape mitigations for visitor use.		**High** Natural sounds are frequently interrupted by motorized noise, including some loud noise. Motorized noise may be audible up to 25% of any hour, and there may be as many as 25 motorized noise intrusions per day that exceed natural ambient sound. Motorized noise does not exceed 60dBA.	**High** Visitors commonly encounter other parties in these areas, although they still have many opportunities to be alone. They generally encounter 5 or fewer parties per day.	**No** No parties are encountered that are larger than 6 people.	**Medium** During the season of peak visitation, visitors may have to camp within sight or sound of others, but often are able to avoid doing so. At other times of year visitors generally are able to camp out of sight and sound of others.	**Medium** Visits to these areas require self-reliance, but may not require extensive time commitments, specialized backcountry travel skills, or extensive advance planning.	**Medium** Rangers may make routine visitor contacts, so visitors may be aware of administrative presence. Visitors may occasionally encounter staff or permitted researchers involved in inventory and monitoring projects and research in some areas.
N/A Identifies an alpine area that has very scarce or no vegetation or soil. Trails and campsites on snow are not monitored.	**Low** Visitors have at most 1 encounter per trip with modern equipment or a landscape modification.			**Medium** Natural sounds predominate in this area, but there are infrequent motorized intrusions, a few of which may be loud. Motorized noise may be audible up to 15% of any hour, and there may be as many as 10 motorized noise intrusions per day that exceed natural ambient sound. Motorized noise does not exceed 40dBA.	**Medium** Visitors occasionally encounter other parties in these areas, but are almost always alone. They generally encounter 2 or fewer parties per day.		**Low** Visitors are always able to camp out of sight and sound of others.	**Low** Visits to these areas require significant time commitment, some specialized backcountry travel skills, advance planning, and a high-degree of self-reliance.	**Low** Administrative presence is generally limited to emergency activities and occasional patrols, with research and resource monitoring projects in some areas.
				Low Natural sounds predominate in this area and motorized noise intrusions are very rare and usually faint. Motorized noise may be audible up to 5% of any hour, and there is no more than 1 motorized intrusion each day that exceeds natural ambient sound. Motorized noise does not exceed 40dBA.	**Low** Visitors are unlikely to encounter other parties in these areas during the course of their backcountry trip.		**N/A** No camping will be allowed on the trails.	**Very Low** Visits to these areas require significant time commitment, specialized backcountry travel skills, thorough advance planning, and a high degree of self-reliance.	
					N/A There is no standard for encounter rate in this area. Visitors may always be within sight or sound of other visitors.				
Notes The "Medium" descriptor is intended to match current conditions in the Old Park in areas accessible from the park road corridor. The first phase of the monitoring program will utilize existing data and new field observations to describe those conditions in more detail.	**Notes** "Modern equipment" includes communication facilities, research equipment, chain saws, motorized or mechanized vehicles on the ground, and other similar devices. This definition does not include portable devices that a person could reasonably carry without assistance (e.g., cell phones, GPS units, fuel-burning stoves), subsistence equipment such as traps or firearms, or aircraft in flight. An "encounter" refers to visual recognition. A single trail or route markers associated with a single route will count as only one encounter. Audio recognition of noise is covered under the Natural Sound Disturbance standards.	**Notes** "Landscape modifications" specifically do not include historic or cultural resources such as historic cabins, gravesites, or other structures or artifacts. They also do not include permitted modifications for subsistence use such as cabins or trapline trails.		**Notes** "Audible" means audibility to a person of normal hearing. Maximum sound levels assume the measurement device is more than 50 feet from the noise source. For comparison, 40dBA is the overall sound level inside a typical residential home. 70dBA is the sound level of a vacuum cleaner as perceived by the user.	**Notes** An encounter is the unaided recognition by sight or sound of another park user, including other recreationalists or subsistence users. An encounter does not include aircraft in flight which are addressed under Natural Sound Disturbance.		**Notes** This category refers only to the opportunity to camp outside of sight or sound of other park visitors; however, visitors may still choose to camp where they can see or hear others. "Sight or sound" refers to unaided recognition of another campsite from the site where the visitor camps for the night.	**Notes** NPS management largely determines the degree of accessibility by providing facilities (such as trails) or services (transportation, guide services) that determine how easy or difficult it is to travel in an area of the park. Terrain also plays a role, primarily in the alpine mountaineering areas that require specialized equipment and knowledge. These are the only areas that achieve a "very low" rating, although the availability of guide services that can provide equipment and instruction can boost the rating to a "low." Areas accessible to day visitors who decide to visit spontaneously without planning or preparation achieve a "high" rating.	**Notes** This category only includes interactions with administrative and research personnel, which are not included with the encounter rate standards given above. Interactions with park aircraft, research equipment, snowmachines, or other equipment are included in the standards for Evidence of Modern Human Use and Natural Sound Disturbance.

Appendix A: Backcountry (Natural Zone) Management Areas

Indicator	Monitoring	Process for Evaluation
Trail & Campsite Disturbance	Monitoring will occur at three levels. These include: 1) the use of an existing grid system of plots for monitoring changes in vegetation cover that are randomly distributed through the park and preserve, 2) a set of index sites where known social trail or campsite formation can be monitored, and 3) a random sample of additional locations selected each year. Variables to monitor will include bare ground, vegetation cover, soil compaction, physical damage to plants, and site characteristics, such as soil moisture and soil temperature.	The "Medium" descriptor is intended to match current conditions in the Old Park in areas accessible from the park road corridor. The first phase of the monitoring program will utilize existing data and new field observations to describe those conditions in more detail.
Evidence of Modern Human Use and Landscape Modifications	Monitoring will be conducted at least once every five years by visitor survey, and will be supplemented by continuous observation of ranger patrols.	The first visitor survey after plan approval will contain questions to evaluate the usefulness of this indicator and investigate other alternatives for indicating the impact of modern civilization on the wilderness experience. Survey results could be used to modify this indicator, but the relative differences between categories (High, Medium, Low) will be retained.
Litter & Human Waste	Monitoring will be conducted at least once every five years by survey of backcountry visitors. This information will be supplemented by the observations of park staff during backcountry patrols.	
Natural Sound Disturbance	Sound monitoring will be conducted on a continuous basis using remote monitors. Long-term monitoring and attended monitoring will take place at locations of particular concern or where it has been determined that management action is necessary to meet standards. Other locations will be randomly sampled.	Indicators and standards will be used as benchmarks for five years while additional information is gathered through the initial stages of the monitoring program. After five years, the NPS will propose changes to either the indicators or standards through a public process. Relative differences between categories (Low, Medium, High, Very High) will be retained during the revision process.
Encounters with People and Large Groups	Monitoring will be conducted at least once every five years by survey of backcountry visitors and "displaced"backcountry visitors. This information will be supplemented by the observations of park staff during backcountry patrols. "Displaced" backcountry visitors are those who will visit the park backcountry, but do not because management limitations, crowding, or other factors make it an undesirable destination.	The NPS will review encounter rate standards after each five-year survey to evaluate visitor satisfaction and the success of the standards in achieving management area goals. If professional judgment suggests that changes are necessary, the NPS will propose new indicators and/or standards through a public process. The relative differences between management areas will be retained.
Camping Density	Monitoring will be conducted at least once every five years by survey of backcountry visitors. This information will be supplemented by observations of park staff during backcountry patrols.	As part of the monitoring process, NPS will evaluate the importance placed by park users on this indicator. The distinctions between categories could be adjusted through a public process within the context of all the indicators related to "social conditions" in the park backcountry.
Accessibility	This category is descriptive only. The actions that determine the rating are listed elsewhere in this plan. Since the status will not change without additional action, monitoring is unnecessary.	
Administrative Presence	Ranger patrols will record and report visitor contacts. Visitor surveys will assess the amount and quality of interactions between visitors and NPS rangers and researchers at least once every five years.	There are no specific quantitative indicators or standards proposed for this category.

Appendix B: Frontcountry Management Areas

Management Zoning

The 1986 General Management Plan established four zoning classifications for park land that provide general guidance for management. According to the 1995 Statement for Management, actions such as the current planning effort must be consistent with these prescriptions unless the General Management Plan is amended. Following this direction, the section below amends the 1986 GMP to further define several sub-zones within the Park Development Zone only. The three remaining zones (Natural Zone, Historic Zone, and Special Use Zone) will remain as described in the GMP.

Level 1 Development Sub-Zone (D-1): This sub-zone includes areas in which major permanent facilities are located. It may include commercial facilities, interpretive facilities, and other administrative and support facilities such as offices, maintenance buildings, and employee housing. The sights and sounds of people and vehicles are common in this sub-zone.

Areas included:
Visitor Access Center and parking lots
Visitor services center and parking proposed near existing VAC

Camper conveniences center and parking lots
Former hotel area (site of new environmental education center)
Employee housing in former hotel area
Railroad depot
C-camp, maintenance area (existing auto shop)
Headquarters housing and offices
Toklat housing and maintenance area
Eielson Visitor Center
Wonder Lake Ranger Station

Level 2 Development Sub-Zone (D-2): This area includes visitor services and administrative support facilities such as campgrounds, rest areas, and trail heads. This sub-zone does not allow for commercial facilities and buildings are limited to smaller structures. While the sights and sounds of people and vehicles are common, these areas are immediately adjacent to backcountry or designated wilderness.

Areas included:
All existing campgrounds, with expansions at Riley Creek
New campground designated at Yanert River
All existing rest areas
New rest area and bus turnaround at Savage River area
Savage River parking area, trailhead, and picnic area
All utility corridors
All current and future gravel acquisition sources

Sensitive Resource Protection Sub-Zone: This area includes all wildlife closures, which may border on a road but extend into designated wilderness. Human presence within these areas comprises an immediate threat to wildlife populations or other critical resources and is

therefore allowed by permit only.

Areas included: Wildlife closures

Railroad Right-of-Way: This sub-zone is similar to the "Special Use Zone" designation in the 1986 GMP in that it is not owned and managed by the National Park Service. Cooperative management with the Alaska Railroad is essential to ensure that conflicts with other park uses and resources do not occur.

Motorized Sightseeing Sub-Zone 1: This sub-zone allows for frequent, year-round traffic that includes commercial vehicles. The visitor experience generally depends on a vehicle and may include some scenery and wildlife viewing.

Areas included: George Parks Highway between the two Nenana River bridges

Motorized Sightseeing Sub-Zone 2: This sub-zone is designated for access to developed and administrative areas and may include some commercial traffic. Another primary activity is wildlife and scenery viewing that is generally dependent on a vehicle.

Areas included: Park road from George Parks Highway to Headquarters

Motorized Sightseeing Sub-Zone 3: The primary activity in this sub-zone is wildlife and scenery viewing that is generally dependent on a vehicle. Commercial vehicles are restricted in these areas.

Areas included: Park road from Headquarters to Savage River Bridge (Mile 14.8)

Wildlife Viewing Sub-Zone 1: This sub-zone includes part of the gravel section of the park road on which the primary purposes include wildlife and scenery viewing. Visitors travel on one of the bus systems and private vehicles are restricted. The only facilities present include the park road and generally one rest area for every hour of travel. Visitors can expect a greater level of traffic in this sub-zone than in wildlife viewing sub-zone 2.

Areas included: Park road from Savage River Bridge to Teklanika River Bridge.

Wildlife Viewing Sub-Zone 2: This sub-zone includes the gravel section of the park road on which greater restrictions (rules of the road) apply. Buses are given the right-of-way and the primary purposes include wildlife and scenery viewing. Visitors must use one of the bus systems and private vehicles are restricted. The only facilities include the park road, one or two visitor contact stations, and generally one rest area for every hour of travel. Visitors can expect a lower level of traffic than in wildlife viewing sub-zone 1.

Areas included: Park road from Teklanika River bridge to former park boundary north of Wonder Lake.

Pedestrian Sub-Zone: This sub-zone provides a wilderness threshold feel even though sights and sounds of people and development are nearby. Trails are well-defined, frequently used, and rarely take people more than 1 mile from a trailhead or other development.

Areas included:

Entrance area trail system, including trail to Horseshoe Lake, Taiga Loop Trail, Cultural resources trail, Rock Creek Trail, and lower section of Mt. Healy Overlook Trail
Loop trails at Polychrome rest area and Eielson Visitor Center
Savage River nature trail at bus turnaround
Trail linking Nenana River with Riley Creek area
Loop trails at Primrose Ridge, Polychrome and Toklat rest areas, and Eielson Visitor Center
Trails at Teklanika rest stop and north end of Wonder Lake

Hiker Sub-Zone: This sub-zone provides a sense of being immersed in a natural landscape, although most comforts and conveniences are within 5 miles away. Visitors must commit some time and physical exertion and the only facilities present are unpaved trails or marked routes.

Areas included:
Upper section of Mt. Healy overlook trail
Nenana River corridor trail

Backcountry Day Use Sub-Zone: This sub-zone provides a wilderness threshold feel although it may be close to roads, campgrounds, or other development. In some cases visitors may need greater route-finding skills than in the hiker sub-zone. There are no designated trails or routes in this sub-zone.

Areas included: All remaining areas in which backcountry camping is not allowed.

Backcountry Camping Sub-Zone: This sub-zone generally provides a wilderness feel although it is not designated wilderness. It includes areas at least 1/2 mile from the nearest road or other development, and visitors will need to commit some time, energy, and route-finding skill. There are no designated trails or routes in this sub-zone.

Areas included: All remaining areas in which backcountry camping is allowed.

Indicators

As part of the VERP program, the NPS would test several indicators to ensure that the visitor experience and resources are adequately protected in each sub-zone.

The following environmental indicators would initially be tested upon implementation of the plan:

- Wildlife-vehicle interactions (changes in wildlife behavior attributable to human presence)
- The number of unofficial (social) trails
- The need for temporary wildlife closures because of inappropriate human behavior

The following social indicators would initially be tested upon implementation of the plan:

- Social crowding (people at one time at an attraction site or on a segment of a trail)
- Number of parties seen while traveling on or off trail in the backcountry
- Traffic congestion on the main park road

Based on these indicators, standards would be established for each management sub-zone that result in protection of the desired visitor experience and resource condition. Both environmental and social indicators would be tested during the busiest part of the season in July, with some testing of environmental standards during the remainder of the visitor use season as well.

Appendix C: Road Management

Background Information

A road into the interior of Denali was proposed early in the park's history by park managers and supporters. The primary goal was to provide visitors with an improved means of access to experience the scenic vistas and to enjoy the abundant wildlife for which the park had been established.

The National Park Service entered into an agreement with the Alaska Road Commission (ARC) whereby the ARC would build and maintain the park road following NPS guidelines and using NPS funds. Road construction began in 1921-1922 when a wagon trail was brushed out from park headquarters at McKinley Park Station to Savage River. The road to Savage River was completed in 1925. The road and bridges to Toklat were completed by 1931, and by 1938 the entire road to Kantishna had been constructed.

The original park road reflected the technologies then available for construction in a remote Alaskan wilderness. Road planners and builders anticipated small traffic volumes since the park was accessible only by rail. The road wound sinuously through the mountains and across the tundra, taking advantage of vistas and overlooks whenever and wherever possible. Topography and terrain dictated the route. The road followed the features of the land rather than using large bank cuts and slope fills to overcome them. Construction occurred using the materials at hand. This process led to a primitive, low speed road located in a wild and pristine land.

Access to the park became easier through the years, and visitor use increased. The Denali Highway was complete by the late 1950s, making it possible to drive to the park. While this was still an arduous journey that typically took 1½ days from Anchorage, the increasing number of vehicles provided a preview of the significant increase in traffic that would occur with a direct link to the proposed George Parks Highway between Anchorage and Fairbanks.

Based on increasing traffic and the projected growth, the Bureau of Public Roads began upgrading and widening the park road in the 1960s. Widespread public opposition resulted, led by Olaus Murie who stated that "This drastic rebuilding of the old road shows an obsessive regard for superhighway standards and a lack of appreciation for the spirit of this northern wilderness (Murie 1965)". The "wilderness feel" of a trip on the park road had become an integral part of the visitor experience. In response to public opposition, construction was halted in 1968, but not before the road had been widened and paved to the Savage River and widened in preparation for possible paving to the Teklanika River. Road work since then has been concentrated on bridge replacements, road maintenance and spot improvements in troublesome areas.

The park implemented a Visitor Transportation System (VTS) in 1972 in anticipation of the large increase in traffic that would result from completion of the George Parks Highway be-

tween Anchorage and Fairbanks that same year. Private automobiles were restricted on the road beyond the Savage River to visitors traveling to campgrounds, Kantishna property owners, and other special permits.

The visitor transportation and concessioner tour bus systems expanded significantly to accommodate increasing numbers of visitors through the years. Concerns about the effects of increased traffic on wildlife as well as safety issues resulting from two-way travel on a narrow road led to restrictions on the overall number and types of traffic in the 1986 General Management Plan. Even with these restrictions, the increasing volume and weight of traffic, or traffic loading, had become an issue because of the historically inadequate level of annual road maintenance and because of the increasing weight of vehicles, especially buses.

In 1982, the National Park Service started a road rehabilitation program to address road maintenance and improvements. Years of traffic and maintenance had removed almost all surface materials down to the road base, making it difficult to maintain the road through grading alone. Many sections had become difficult to negotiate because of wear, washouts and a rough surface. Some sections had actually become more narrow because of erosion and wear.

The five year program started in 1982 proposed to "maintain the road on its current alignment" with provisions for rehabilitating the existing gravel surface through the placement of additional gravel fines. Grade raises were proposed in specific areas, and an effort was made to reclaim the originally established width in areas narrowed by erosion and wear. However, the program plan stated that "widening of the road would not be undertaken as a general rule."

Material sources for road rehabilitation were identified and the volumes of gravel available from each were specified. However, material from these sources proved unsuitable in many cases. The rehabilitation effort was stopped after three years because of the lack of gravel and because of public and staff concerns over the apparent change in the character of the road. Road character was viewed as integral to the visitor experience.

Denali National Park Road Character and Purpose

The Denali National Park road serves a variety of functions over its approximately 88-mile length. It provides visitors of all abilities an opportunity to travel by vehicle through and access a rugged wilderness area, observing wildlife interactions in natural habitat as well as outstanding scenery. It provides circulation and access to public and administrative facilities, and it helps meet the ANILCA requirements for reasonable access to private property in the Kantishna hills.

The character of the park road and its relationship with the landscape through which it passes are an integral part of the visitor experience at Denali. As visitors travel west into the park, they experience a transition in environment from urban to rustic to primitive. The road itself is part of this transition. The first fifteen miles of road, to Savage River, is a dual purpose facility. It must efficiently handle large volumes of traffic traveling in and out of the park and between various facilities in the entrance area. It provides the visitor an opportunity to see and experience the park resources without the need to interface with the public transportation system. It also serves as a conduit for vehicles traveling into the more remote areas of the park.

The next segment of the road, between the Savage and Teklanika Rivers, is a transition zone. The driving surface changes from pavement to gravel. Efficient traffic flow is not the only function of the road; allowing the visitor to experience the landscape is of increasing importance.

West of the Teklanika River, the landscape and the road change. Rolling terrain gives way to steep mountains and rugged canyons. The park road changes from a uniform width, two-lane facility to a variable width one-lane road with two-lane sections and pullouts. At this point, the landscape and the character of the road become integral parts of the park experience. The sinuous path emphasizes the dramatic terrain. Engineered structures such as bridges are used only as necessary to protect the resource or preserve the road. Signs and related items are kept to a minimum. The character of the road is in keeping with the character of the land: a primitive, low-speed road located in a wild and pristine land.

Current Conditions

The visitor transportation system and the traffic limits established in the 1986 General Management Plan have been largely successful in achieving their purposes of protecting both the outstanding visitor experience and the unique resources of the park. Trained and experienced bus drivers are able to safely negotiate a road that has seen minimal changes since it was first constructed 60 years ago. However, the road structure is currently subject to a burden for which it was never intended.

By 1980 several road studies had referenced structural condition. The 1994 Road System Evaluation attempted to quantify structural needs. These studies were all surface only inspections, and in 1995 the first geotechnical assessment of the road was made, including subsurface investigation, sampling and analysis. This investigation showed that the road was originally constructed by the methods then available and for the vehicles common at the time. Requirements for buses used today could not have been anticipated. The road was built almost entirely with the native soils on site, often burying organic layers in the process. It did not include a constructed base or sub-base structure, and it was not mechanically compacted except at the surface. Problems most frequently identified by the assessment include poor subsurface drainage, saturable silts and clays (often with organics) in the roadbed, and low density soils in the roadbed. The constructed surface ranges in thickness from 4 to 8 inches east of the Teklanika River and from 2 to 6 inches west of the river. The constructed surface is mainly composed of native soil borrow rather than processed aggregates.

A number of previous road studies have recommended relatively extensive changes to road width and alignment to address perceived traffic safety concerns. Studies done in 1994 and 1995 narrowed the concern to the repeatedly identified lack of adequate safe passing locations west of Mile 68. Lack of appropriately spaced passing areas prevents bus drivers from being able to plan and stage safe passes as they do east of Mile 68. Studies also found that in some locations the problem was inadequate sight distance rather than inadequate road width.

The road is currently subject to a traffic load that considerably exceeds its structural capacity. This has resulted in gradual but continuous degradation of the road. Along with inadequate annual surface maintenance, this threatens both road character and road reliability. In Alternatives C, D, and E of the DCP [1], the park proposes to address this problem through subsurface investigation, continued sampling and analysis, and a program to improve road structural capacity as outlined below.

[1] These are alternatives from the 1997 Entrance Area and Road Corridor Development Concept Plan.

Road Repairs and Maintenance

Methods

A proposed action common to all alternatives is that the NPS become more proactive in dealing with road repairs and maintenance. Site plans would be developed to provide an optimum design and to most effectively use gravel resources before initiating a repair project. The following methods would be incorporated into site planning and repair:

Install Adequate Subgrade Drainage Systems: Systems to be used include trenching to design grades for site drainage and installation of curtain, french, and lateral drainways through the roadway or lateral sections as part of the road subgrade. Designs may also include geofabric, geogrid, pipes or other engineering materials. Repair depths may range from under 5 to over 15 feet depending on site conditions, as long as there is free drainage to daylight.

Structural Repairs (including road edge stability repair): Structural repairs would include digging out and removing unsuitable subgrade and surface materials; installing geofabrics, geogrids, fillers, binders or other engineering materials where called for by the site conditions; and proper compaction of the road section being repaired.

Use Adequate Surface Material: Surface material that has an adequate bearing capacity and resistance to wear would be used for road maintenance and repair projects.

Proposed Road Improvement Projects

Road improvement projects needed have been identified through on-site investigation by park staff and in consultation with bus drivers. Projects are listed in priority order to provide general guidelines and to demonstrate the types of failures along the park road that are most in need of repair. Lower priority projects may need to be moved up on the list if road conditions deteriorate further.

The level of repair to correct the deficiencies identified would vary with each alternative, ranging from minor repairs to treat the immediate problem in Alternative C to more thorough, proactive repairs in Alternative E.

Priority 1: Correct Safety Concerns. The highest priority road improvement projects are repairs needed to maintain visitor safety on the park road. These projects include improving site distance, providing an adequate road surface for vehicles to pass in opposite directions, improving road surface friction, and repairs to culvert crossings and curve super-elevations in certain locations. Projects would be selected from the following list of examples, which would be updated at least once each year based on changing conditions. A project design would be completed and subsequently implemented for each specific project within the road sections identified below. None of the alternatives calls for systematic repair of the entire section identified; rather individual projects would be designed and implemented within the section listed.

Improve Site Distance and Provide for Safe Vehicle Passing: Examples at mile 38, 43.5, 68, 68.8, 73.0, 74.8-74.9, 77.6-77.7, 77.9, 79.4, 79.6, 80.3, 81.1, 81.3, 81.8, 83.2, 84.5, 87.1-87.2, 87.8

These points have become narrower than nearby sections of the road because of inadequate preventative maintenance, and these areas also contain blind curves. Repairs are required to provide a safer, more uniform road surface, and proposed work would not change the overall road alignment in these areas. Site distance can be improved in many cases by reducing the slope of cut banks.

Improve Road Surface Friction: Examples at mile 67-69

Points within this section of the road are known as the "greasy corners" because of high clay content in the road surface, and they constitute a traffic safety hazard. Repair methods would include providing and maintaining an adequate gravel surface by hauling in new material from the proposed gravel sources in Kantishna.

Repair Culvert Crossings: Examples at mile 39-43 and 53-60

Scallops are found at culverts at several points within these sections. These culverts need to be lengthened and the adjacent road sections repaired to provide a safer, more uniform road surface. The overall road alignment in these sections would not be affected.

Repair Curve Super-Elevations: Examples at mile 41-43.

At points along this section of the park road the transverse (side-to-side) slope is too great, resulting in a safety concern. This would be corrected by adding surface material.

Priority 2: Repair Existing Structural Failures and Sections in Imminent Danger of Structural Failure. Repairs to correct structural failures are required in areas which, if left untreated, could soon threaten traffic safety. These structural failures include shear failures, slumps, active pumping of the road surface, road surface rutting, inadequate subgrade drainage, and surface cracking. As with priority 1, actual repair projects would be selected from the following list of examples, which would be updated at least once each year based on changing conditions. A project design would be completed and subsequently implemented for specific areas within the road sections listed below.

Repair Shear Failures and Slumps: Examples at mile 37.5-38

Evidence of these structural failures includes concentric or block shear cracking in the road surface followed by subsidence. Although these failures threaten traffic safety, they are small enough to be corrected by upgrading the road structure.

Repair Active Road Surface "Pumping" and Road Surface Rutting: Examples at mile 17-18, 31.5-34, 38-40, 48-49, 50-52

"Pumping" of the road surface is attributable to inadequate, poorly drained subgrade material which produces a boil of saturated subgrade material at the surface. Road surface rutting results because of this inadequate, poorly drained condition and because of traffic loading.

Inadequate Subgrade Drainage: Examples at mile 17-18, 23-25, 31.5-34, 45.5, 50-52, 61-63, 68-76, 85-88

Areas within these sections of the road need site-specific drainage systems. Subgrade drainage is essential to providing adequately designed repairs to the road structure. Installation of site-specific drainage systems such as curtain drains can in some cases provide necessary structural stability.

Priority 3: Repair Documented Structural Problems. This category includes areas where structural problems are known to exist and which, if left untreated, would result in structural failure. It also includes sections along the park road where structural problems could be occurring but where more information is needed before designing a repair project. As with priority 1 and 2 projects, actual repair projects would be selected from the following list of examples, which would be updated at least once each year based on changing conditions.

Surface Cracking: Examples at mile 17-18, 23-25, 31.5-34, 38-40, 45.5, 48-49, 50-52, 61-63, 68-76 and 85-88

At certain points within these sections of the park road, checkerboard cracking or "alligatoring" appears on the surface as a symptom of potential structural failure. This condition indicates repetitive vertical flexing and horizontal shear in the subgrade soils and can be corrected by hauling in new material.

Grade Raises: Examples at mile 31.5-34.2, 36-37, 70.4-72.1

Grade raises averaging between 12 and 18 inches are required at certain points within these sections of the park road to achieve adequate subdrainage and repair subgrade problems. In places the terrain is so flat and the present road surface so low that achieving adequate subdrainage and structural integrity is not possible without elevating the surface. Specific sites needing improvements would be selected based on the overall grade of the road in the area and the surrounding terrain.

Annual Review and Subsequent Environmental Compliance

Internal review of the priority projects listed above would provide the flexibility to move a project or projects from one priority level to another either within a season or between seasons. All major projects (non-emergency and not routine maintenance) must have a project design that is subject to internal review. Projects would be approved by the park superintendent based on the following criteria:

1) If listed within the DCP alternative selected and using the general methods outlined above, a project can be approved based on the environmental analysis in this DCP/EIS and pending any necessary cultural resources compliance.

2) Projects not specifically listed above but determined to be at the same priority level because of changing conditions may also be approved after internal review and upon completion of any necessary cultural resources compliance.

3) Projects in lower priority categories than those included in the alternative selected would require public notification before being initiated. This notification may be in formal (such as a newsletter) for projects that fit within the general guidelines outlined above. Further environmental compliance such as a site-specific environmental assessment would be necessary when the proposed project calls for new or different methods than identified above, alternative gravel sources, or significantly higher

quantities of gravel than other high priority projects.

Gravel Sources [2]

The Development Concept Plan/Environmental Impact Statement amends the Gravel Acquisition Plan to allow use of gravel from in-park sources for structural and geometric repairs and other improvements. The National Park Service would continue to investigate alternative materials and evolving technologies to minimize gravel requirements in maintenance activities. Information on proposed new gravel extraction sites is provided below.

Teklanika River

The proposed site is located downstream from the Teklanika bridge in an alluvial floodplain near the Teklanika Campground and would be reached from the campground road. Techniques developed for the Toklat River source would be applied at this renewable source. Available quantities are expected to be somewhat less than from the Toklat River, and additional information on feasibility is needed before development of this new source.

Extraction Methods. Extraction methods and procedures within river sites would be developed and followed similarly to the current "Toklat River Standard Operating Procedures" found within the Gravel Acquisition Plan. Design parameters include:

1) Design gravel excavations as mirror images of and connected to bends in the natural channels. The length, width, depth and slope of the excavated channels must match the natural channel segments.

2) Excavation proceeds downstream to upstream. The final scrape must open the exca vated mirror channel to flow from the natural channel.

3) Locate excavations in areas where sediment deposition is likely.

4) Limit the total volume of stream bed material removed by an individual excavation to the site-specific constraints caused by yearly depositions. Extraction is also limited to no more than 2,500 cubic yards per scrape, with no more than three excavations per season. These limits are to be re-evaluated periodically and do not necessarily apply to other sites.

5) Excavations are limited to low water periods.

6) Monitor both short- and long-term effects on the river upstream and downstream of the excavation areas. Long-term monitoring includes annual level surveys of the existing cross section system.

7) Gravel excavation operations in the flood plain could result in the incidental discharge of fill material, which requires an individual Section 404 permit.

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[2] This section has been replaced by the 2003 Gravel Acquisition Plan.

Moose Creek Terrace

There are alluvial, colluvial and terrace gravels suitable for development along the Moose Creek road between the North Face Lodge and the boundary of Liberty claim #23 approximately 2 miles upstream. The proposed site is approximately 1 mile southeast of the North Face Lodge. It was originally identified and considered as a high priority for development in the Denali Road Improvement Study of February 1984. It is not visible from the park road. Approximately 166,000 cubic yards are estimated to be available from this site.

Extraction Methods. The Moose Creek Terrace site would be an open pit gravel excavation. Access roads would comply with existing constraints, including possible spanning of anadromous streams with arch culverts where necessary to protect fisheries. Pit dimensions would include adequate floor space for efficient operation of the plant, safe trucking operations, and stockpile areas for raw and processed materials. Organics and undesirable overburden would be stripped and stockpiled on site for future reclamation and rehabilitation work. Excavations would follow site-specific development plans. The following mitigation measures would be implemented:

1) Provide for adequate pit drainage to prevent erosion.

2) Control noise by scheduling operating hours and use water for dust suppression.

3) Prevent pollution by using chemical toilets, bear proof trash containers, and petroleum spill prevention kits. A spill prevention plan would be in place and practiced on-site.

Similar extraction methods would be used in developing gravel sources on previously disturbed lands in the Kantishna area, the priority under the proposed action. The Moose Creek terrace site could be developed later if necessary

Appendix D: Possible RS 2477 Rights-Of-Way

The State of Alaska provided a list of 28 potential RS2477 rights-of-way that was included in an appendix to the 1986 General Management Plan. The State later provided a map of rights-of-way published in state statutes (Alaska Statutes 19.30.400(d)) that "have been accepted by public users and have been identified to provide effective notice to the public of these rights-of-way" (AS 19.30.400(c)). As described in the main text of this consolidated General Management Plan, "Identification of potential rights of way in Appendix D does not establish the validity of these RS 2477 rights of way and does not provide the public the right to travel over them (although use of these routes may be allowed under other authorities discussed elsewhere in the access section)."

The accompanying list of rights-of-way included 15 relevant to Denali National Park and Preserve. These are depicted on Maps 22A, B, and C and are named and numbered as follows:

RST Number	Name
340	Lignite-Stampede
341	Roosevelt-Kantishna
342	Roosevelt-Glacier
343	Kobi-Kantishna
344	Lignite-Kantishna

345	Kobi-McGrath (via Nikolai & Big River)
346	Nenana-Kantishna
348	Spruce Creek Trail
414	Eldorado Sled Road
491	Rex-Roosevelt
492	Glacier-Kantishna via Caribou Creek
493	Quigley Ridge Road
513	Dutch Creek-Bear Creek-Peters Creek (Winter)
707	Windy Creek Trails (Cantwell)
1608	Youngstown-Home Lake

Appendix E: Wilderness Suitability Review

Section 1317(a) of ANILCA directs that a review be made of the suitability or nonsuitability for preservation as wilderness of all lands within unit boundaries not so designated by the act. Section 1317(b) specifies that "the Secretary shall conduct his review, and the President shall advise the United States Senate and House of Representatives of his recommendations, in accordance with the provisions of sections 3(c) and (d) of the Wilderness Act." The review is to be completed by December 2, 1985. This suitability review meets the requirements of ANILCA. Recommendations on whether to designate suitable areas as wilderness will be made following completion of the general management plan. An EIS will be prepared as part of the wilderness recommendation process. The public will have the opportunity to review and comment on these recommendations, and public hearings will be held. Upon completion of the EIS and secretarial review, the president will make his recommendations to Congress.

All lands determined suitable for wilderness designation will be managed under the terms of ANILCA to maintain the wilderness character and values of the lands until designation recommendations have been proposed and Congress has acted on these proposals.

WILDERNESS SUITABILITY CRITERIA

Wilderness suitability criteria were developed to reflect the definition of wilderness contained in the Wilderness Act and the provisions of ANILCA specific to wilderness areas in Alaska. These criteria were applied to all nonwilderness lands in the park and preserve to determine their suitability for designation (Table E-1). These criteria relate to the physical character of the land and current land status. Factors such as appropriateness for management as wilderness and state and local concerns with wilderness management will be considered when recommendations are prepared after the general management plan has been approved. All future wilderness recommendations will recognize valid existing rights including rights-of-way under RS 2477.

Table E-1: Wilderness Suitability Criteria

Descriptions of Land or Activity		Suitable for Wilderness	Not Suitable for Wilderness	Suitability Pending
Land Status	Federal			
	Federal land under application or selection			
	State and private land patented or tentatively approved			
	Private ownership of subsurface estate			
Mining	Areas with minor ground disturbances from past mining activities			
	Areas with major ground disturbances from past mining activities			
	Areas with current mining activities and ground disturbances			
Roads and ORV trails	Unimproved roads or ORV trails that are unused or little used by motor vehicles			
	Improved roads and ORV trails regularly used by motor vehicles			
Airstrips	Unimproved or minimally improved and maintained airstrips			
	Improved and maintained airstrips			
Cabins	Uninhabited structures; hunter, hiker, and patrol cabins			
	Cabins inhabited as a primary place of residence			
Size of Unit	Greater than 5,000 acres adjacent to existing wilderness, or of a manageable size			
	Less than 5,000 acres or of unmanageable size			

LANDS SUBJECT TO REVIEW

ANILCA, section 701, formally designated approximately 1,900,000 acres of Denali as wilderness. The area covered by this congressional designation comprises most of what was Mount McKinley National Park, with the exception of a buffer zone of 300 feet (90 meters) surrounding each development, a corridor extending 150 feet (45 meters) from either side of the centerline of the park road, existing borrow sources and waysides, and lands east of the railroad right-of-way. The designated wilderness area will be managed in accordance with the provisions of the Wilderness Act except for the extraordinary uses allowed by ANILCA because of the unique conditions in Alaska. For example, section 1110 of ANILCA allows the use of snowmachines, motorboats, and airplanes for traditional activities on lands and waters designated as wilderness. Specific closures to this type of use have been proposed for the road corridor and Wonder Lake. Section 1315 permits the continuation of existing public use cabins

and the construction of a limited number of new public use cabins or shelters. Section 1316 allows the continued taking of wildlife where such use existed prior to ANILCA. However, since all hunting was already prohibited in the old Mount McKinley National Park, it will continue to be prohibited in the designated wilderness.

SUITABILITY DETERMINATION

The areas determined to qualify for wilderness designation are shown on the Wilderness Suitability map (see Map 23 – Wilderness Status). This map represents only a preliminary analysis, and a final recommendation could change certain boundaries.

The analysis accounted for such factors as lands needed to serve visitors now and in the future, the land status of those areas added by ANILCA, existing and potential mineral activities, lands needed for operation of the park and preserve, and the locations of improved and regularly used roads. Lands in other than full federal ownership are ineligible for wilderness designation. The park road corridor is ineligible because of the nature of the visitor use proposed for these areas. The Kantishna mining district is ineligible for wilderness designation because of the disturbance to the landscape by mining and the road system.

If additional lands are acquired by the federal government, as discussed in the "Land Protection Plan," they will be studied for wilderness suitability. Conversely, any lands deleted from federal ownership will no longer be eligible for wilderness designation.

The approximately 3.9 million acres determined suitable for wilderness designation combined with the areas already designated amount to approximately 95 percent of the park complex. Managing these lands according to the criteria of the Wilderness Act and ANILCA will provide additional protection to the Denali environment by precluding large-scale development and the attendant disturbance of wildlife and other resources. At the same time, formal designation of preserve lands will not prohibit or otherwise restrict sport hunting, fishing, trapping, or traditional subsistence activities. Nor will wilderness designation of the park additions affect traditional subsistence use in these areas.

Regardless of this suitability review or any subsequent National Park Service proposal, wilderness can be designated only by Congress, and any subsequent change in the status and management of designated areas can also be accomplished only by Congress. In the interim those lands considered suitable for designation as wilderness will be managed in accordance with the provisions of the Wilderness Act and the special provisions for Alaska conveyed by ANILCA.

Appendix F: Backcountry Units and Requirements

The 1976 Backcountry Management Plan for Mt. McKinley National Park established a system of backcountry units, associated use limits, a mandatory permit system, and made other administrative decisions such as the prohibition of open fires and pets within the park backcountry. Notice of the permit and use limit decisions was provided in the Federal Register on June 11, 1976 in volume 41, number 114. Subsequent regulations were promulgated at 36 CFR § 13.63 (b) that allowed camping in accordance with the Backcountry Management Plan.

Since that time, as part of 1986 General Management Plan and other administrative actions necessary to respond to emerging issues, operational revisions to this 1976 plan have occurred such as changes in unit boundaries, the unit numbering system, and the adjustment of a few overnight use limits within the subset of units where a backcountry camping permit is currently required. These changes have been incorporated as revisions to the original 1976 plan and continue to be implemented through existing regulations and, when appropriate, the Superintendent's Compendium for Denali National Park and Preserve.

Map 24 shows the system of backcountry units that is currently in use at Denali National Park and Preserve. Table F-1 shows how the revised existing backcountry management plan is being currently implemented with respect to backcountry camping permits, Bear Resistant Food Container use, and overnight camping limits.

Table F-1 Permit and Bear Resistant Food Container Requirements – Denali National Park and Preserve

Unit Number	Unit Name	Backcountry Camping Permit	Bear Resistant Food Container	Overnight Limit (# Of People)
1	Triple Lakes	Required	Required	12
2	Riley Creek	Required	Required	12
3	Jenny Creek	Required	Required	4
4	Upper Savage	Required	Required	6
5	Upper Sanctuary	Required	Required	6
6	Upper Teklanika	Required	Required	6
7	Upper East Fork	Required	Required	4
8	Polychrome Glaciers	Required	Required	6
9	East Branch Upper Toklat	Required	Required	6
10	West Branch Upper Toklat	Required	Required	6
11	Stony Dome	Required	Required	2
12	Sunset/Sunrise Glaciers	Required	Required	4
13	Mount Eielson	Required	Required	4
14	McKinley Bar East	Required	Required	4
15	McKinley Bar West	Required	Required	4
16	Windy Creek	Required	Required	8
17	Foggy and Easy Pass	Required	Required	8
18	Upper Glacier Creek	Required	Required	4
19	Pirate Creek	Required	Required	4
20	McGonagall Pass	Required	Required	
21	Muddy River	Required	Required	8
22	Upper Foraker	Required	—	—
23	West Fork Glacier	Required	Required	8
24	Mount Healy	Required	Required	4
25	Healy Ridge	Required	Required	4
26	Primrose Ridge	Required	Required	4
27	Mount Wright	Required	Required	4
28	Sushana River	Required	Required	8
29	Igloo Mountain	Required	Required	4

30	Tributary Creek	Required	Required	4
31	Polychrome Mountain	Required	Required	6
32	Middle Toklat	Required	Required	4
33	Stony Hill	Required	Required	4
34	Mount Galen	Required	Required	4
35	Moose Creek	Required	Required	4
36	Jumbo Creek	Required	Required	2
37	Lower East Fork	Required	Required	6
38	Lower Toklat	Required	Required	6
39	Stony Creek	Required	Required	4
40	Clearwater Fork	Required	Required	12
41	Spruce Peak	Required	Required	12
42	Eureka Creek	Required	Required	12
43	Eldorado Creek	Required	Required	12
44	Peters Glacier	Required	—	—
45	Mount McKinley	Required	—	—
46	Upper Kahiltna	Required	—	—
47	Mount Foraker	Required	—	—
48	Herron Glacier	Required	—	—
61	Stampede	—	—	—
62	Southeast Stampede	—	—	—
63	Southwest Stampede	—	—	—
64	Kantishna Hills	—	—	—
65	Moose - McKinley	—	—	—
66	McKinley - Birch	—	—	—
67	Birch - Foraker Preserve	—	—	—
68	Herron - Highpower Preserve	—	—	—
69	Swift Fork	—	—	—
70	Bull River	—	—	—
71	Ohio Creek	—	—	—
72	Eldridge Glacier	—	—	—
73	Buckskin Glacier	—	—	—
74	Upper Ruth	—	—	—
75	Lower Ruth	—	—	—
76	Mount Hunter	—	—	—
77	Tokositna Glacier	—	—	—
78	Middle Kahiltna	—	—	—
79	Little Switzerland	—	—	—
80	Upper Yentna-Lacuna	—	—	—
81	Lower Kahiltna	—	—	—
82	Dall-Yentna Preserve	—	—	—
83	Yentna River Preserve	—	—	—
84	Mount Dall Preserve	—	—	—
85	Kitchatna Preserve	—	—	—

86	Mount Mather	Required	—	—
87	Mount Brooks	Required	—	—

Appendix G: Master Memorandum of Understanding

between the National Park Service and the State of Alaska Department of Fish and Game

The text of the agreement appears on the following pages.

MASTER MEMORANDUM OF UNDERSTANDING

BETWEEN

THE ALASKA DEPARTMENT OF FISH AND GAME

JUNEAU, ALASKA

AND

THE U.S. NATIONAL PARK SERVICE

DEPARTMENT OF THE INTERIOR

ANCHORAGE, ALASKA

This Master Memorandum of Understanding between the State of Alaska, Department of Fish and Game, hereinafter referred to as the Department, and the U.S. Department of the Interior, National Park Service, hereinafter referred to as the Service, reflects the general policy guidelines within which the two agenci agree to operate.

WHEREAS, the Department, under the Constitution, laws, and regulations of the State of Alaska, is responsible for the management, protection, maintenance, enhancement, rehabilitation, and extension of the fish and wildlife resources of the State on the sustained yield principle, subject to preferences among beneficial uses; and

WHEREAS, the Service, by authority of the Constitution, laws of Congress, executive orders, and regulations of the U.S. Department of the Interior is responsible for the management of Service lands in Alaska and the conservation of resources on these lands, including conservation of healthy populations of fish and wildlife within National Preserves and natural and healthy population within National Parks and Monuments; and

WHEREAS, the Department and the Service share a mutual concern for fish and wildlife resources and their habitats and desire to develop and maintain a cooperative relationship which will be in the best interests of both parties,

the fish and wildlife resources and their habitats, and produce the greatest public benefit; and

WHEREAS, the Alaska National Interest Lands Conservation Act (ANILCA) and subsequent implementing Federal regulations recognize that the resources and uses of Service lands in Alaska are substantially different than those of similar lands in other states and mandate continued subsistence uses in desi nated National Parks plus sport hunting and fishing, subsistence, and trappi uses in National Preserves under applicable State and Federal laws and regulations; and

WHEREAS, the Department and the Service recognize the increasing need to coordinate resource planning and policy development;

NOW, THEREFORE, the parties hereto do hereby agree as follows:

THE DEPARTMENT OF FISH AND GAME AGREES:

1. To recognize the Service's responsibility to conserve fish and wildlife their habitat and regulate human use on Service lands in Alaska, in acco ance with the National Park Service Organic Act, ANILCA, and other appli laws.

2. To manage fish and resident wildlife populations in their natural specie diversity on Service lands, recognizing that nonconsumptive use and appreciation by the visiting public is a primary consideration.

3. To consult with the Regional Director or his representative in a timely manner and comply with applicable Federal laws and regulations before embarking on management activities on Service lands.

4. To act as the primary agency responsible for management of subsistenc uses of fish and wildlife on State and Service lands, pursuant to app cable State and Federal laws.

5. To recognize that National Park areas were established, in part, to " continuation of the natural process of biological succession" and "to tain the environmental integrity of the natural features found in the

THE NATIONAL PARK SERVICE AGREES:

1. To recognize the Department as the agency with the primary responsibi to manage fish and resident wildlife within the State of Alaska.

2. To recognize the right of the Department to enter onto Service lands timely notification to conduct routine management activities which do involve construction, disturbance to the land, or alterations of ecos

3. To manage the fish and wildlife habitat on Service lands so as to ens conservation of fish and wildlife populations and their habitats in t natural diversity.

4. To cooperate with the Department in planning for management activitie Service lands which require permits, environmental assessments, compa assessments, or similar regulatory documents by responding to the Dep in a timely manner.

5. To consider carefully the impact on the State of Alaska of proposed t or international agreements relating to fish and wildlife resources w could diminish the jurisdictional authority of the State, and to cons freely with the State when such treaties or agreements have a signifi impact on the State.

6. To review Service policies in consultation with the Department to det
mine if modified or special policies are needed for Alaska.

7. To adopt Park and Preserve management plans whose provisions are in s
stantial agreement with the Department's fish and wildlife management
unless such plans are determined formally to be incompatible with the
for which the respective Parks and Preserves were established.

8. To utilize the State's regulatory process to the maximum extent allow
Federal law in developing new or modifying existing Federal regulatio
proposing changes in existing State regulations governing or affectin
taking of fish and wildlife on Service lands in Alaska.

9. To recognize the Department as the primary agency responsible for pol
development and management direction relating to subsistence uses of
and wildlife resources on State and Service lands, pursuant to applic
State and Federal laws.

10. To consult and cooperate with the Department in the design and conduc
Service research or management studies pertaining to fish and wildlif

11. To consult with the Department prior to entering into any cooperative
management agreements.

12. To allow under special use permit the erection and maintenance of fac
or structures needed to further fish and wildlife management activiti
the Department on Service lands, provided their intended use is not i
flict with the purposes for which affected Parks or Preserves were
established.

THE DEPARTMENT OF FISH AND GAME AND THE NATIONAL PARK SERVICE MUTUALLY AGREE:

1. To coordinate planning for management of fish and wildlife resources on Service lands so that conflicts arising from differing legal mandates, objectives, and policies either do not arise or are minimized.

2. To consult with each other when developing policy, legislation, and regulations which affect the attainment of wildlife resource management goals and objectives of the other agency.

3. To provide to each other upon request fish and wildlife data, information, and recommendations for consideration in the formulation of policies, plans, and management programs regarding fish and wildlife resources on Service lands.

4. To recognize that the taking of fish and wildlife by hunting, trapping, or fishing on certain Service lands in Alaska is authorized in accordance with applicable State and Federal law unless State regulations are found to be incompatible with documented Park or Preserve goals, objectives or management plans.

5. To recognize for maintenance, rehabilitation, and enhancement purposes, that under extraordinary circumstances the manipulation of habitat or animal populations may be an important tool of fish and wildlife management to be used cooperatively on Service lands and waters in Alaska by the Service or the Department when judged by the Service, on a case by case basis, to be consistent with applicable law and Park Service policy.

6. That implementation by the Secretary of the Interior of subsistence program recommendations developed by Park and Park Monument Subsistence Resource

Commissions pursuant to ANILCA Section 808(b) will take into account exist ing State regulations and will use the State's regulatory process as the primary means of developing Park subsistence use regulations.

7. To neither make nor sanction any introduction or transplant of any fish o: wildlife species on Service lands without first consulting with the other party and complying with applicable Federal and State laws and regulations

8. To cooperate in the development of fire management plans which may include establishment of priorities for the control of wildfires and use of presc: fires.

9. To consult on studies for additional wilderness designations and in develo ment of regulations for management of wilderness areas on Service lands.

10. To resolve, at field office levels, all disagreements pertaining to the cooperative work of the two agencies which arise in the field and to refe: all matters of disagreement that cannot be resolved at equivalent field l to the Regional Director and to the Commissioner for resolution before ei agency expresses its position in public.

11. To meet annually to discuss matters relating to the management of fish an wildlife resources on, or affected by, Service lands.

12. To develop such supplemental memoranda of understanding between the Commi sioner and the Regional Director as may be required to implement the poli contained herein.

13. That the Master Memorandum of Understanding is subject to the availabilit of appropriated State and Federal funds.

14. That this Master Memorandum of Understanding establishes procedural guidelines by which the parties shall cooperate, but does not create legally enforceable obligations or rights.

15. That this Master Memorandum of Understanding shall become effective when signed by the Commissioner of the Alaska Department of Fish and Game and the Alaska Regional Director of the National Park Service and shall continue in force until terminated by either party by providing notice in writing 120 days in advance of the intended date of termination.

16. That amendments to this Master Memorandum of Understanding may be proposed by either party and shall become effective upon approval by both parties.

STATE OF ALASKA

Department of Fish and Game

By Ronald O. Skoog

Ronald O. Skoog
Commissioner

Date 14 October 1982

U.S. DEPARTMENT OF THE INTERIOR

National Park Service

By John E. Cook

John E. Cook
Regional Director, Alaska

Date October 5, 1982

Appendix H: Denali Special Regulations

Code of Federal Regulations
Title 36 -- Parks, Forests, And Public Property
Chapter I -- National Park Service, Department Of The Interior
Part 13 -- National Park System Units In Alaska--Table Of Contents
Subpart C -- Special Regulations--Specific Park Areas in Alaska

Sec. 13.63 Denali National Park and Preserve.

(a) Subsistence--(1) Resident Zone. The following communities and areas are included within the resident zone for Denali National Park addition:

Cantwell
Minchumina
Nikolai
Telida

(b) Camping. Camping is prohibited along the road corridor and at Wonder Lake, except at designated areas. Camping is allowed in other areas in accordance with the backcountry management plan.

(c) Unattended or Abandoned Property. Leaving unattended and abandoned property along the road corridor, at Wonder Lake, and in the areas included in the backcountry management plan, is prohibited.

(d) Operation of motor vehicles on the Denali Park road west of the Savage River--(1) Do I need a permit to operate a motor vehicle on the Denali Park road west of the Savage River? Yes, you must obtain a permit from the superintendent to operate a motor vehicle on the restricted section of the Denali Park road. The restricted section begins at the west end of the Savage River Bridge (mile 14.8) and continues to the former Mt. McKinley National Park boundary north of Wonder Lake (mile 87.9).
(2) How many permits will be issued each summer? The superintendent is authorized, under this section, to issue no more than 10,512 motor vehicle permits each year for access to the restricted section of the road. The superintendent will issue the permits for the period that begins on the Saturday of Memorial Day weekend and continues through the second Thursday following Labor Day or September 15, whichever comes first. Each permit allows one vehicle one entry onto the restricted portion of the Park road.
(3) How will the superintendent manage the permit program? (i) The superintendent will apportion motor vehicle permits among authorized users following the procedures in Sec. 13.31. Authorized users are individuals, groups and governmental entities who are allowed by law or policy to use the restricted section of the road.
(ii) The superintendent will establish an annual date to evaluate permit requests and publish that date, along with the results of the annual apportionment, in the superintendent's compendium of rules and orders. The superintendent's compendium is available to the public upon request.
(iii) The superintendent will re-evaluate the access requirements of any business that is sold, ceases to operate or that significantly changes the services currently offered to the public.

(4) What is prohibited? (i) No one may operate a motor vehicle on the restricted section of the Park road without a valid permit.

(ii) No one may use a motor home, camper or trailer to transport guests to a lodge or other business in Kantishna.

(iii) No one may transfer or accept transfer of a Denali Park road permit without the superintendent's approval.

(e) Fishing limit of catch and in possession. The limit of catch per person per day shall be 10 fish but not to exceed 10 pounds and one fish, except that the limit of catch of lake trout (mackinaw) per person per day shall be two fish including those hooked and released. Possession of more than one day's limit of catch by one person at any
one time is prohibited.

(f) Mountain climbing. Climbing on Mount McKinley or Mount Foraker without registering, on a form provided by the Superintendent, at least 60 days in advance of any climb is prohibited.

(g) Kantishna area summer season firearm safety zone--(1) What is prohibited? No one may fire a gun during the summer season in or across the Kantishna area firearm safety zone, unless they are defending life or property.

(i) The summer season begins on the Saturday of Memorial Day weekend and continues through the second Thursday following Labor Day or September 15, whichever comes first.

(ii) The Kantishna Area firearm safety zone includes: the Kantishna Airstrip; the State Omnibus Act Road right-of-way; and all public lands located within one mile of the Kantishna Airstrip or the State Omnibus Act Road right-of-way, from the former Mt. McKinley National Park boundary at mile 87.9 to the south end of the Kantishna Airstrip.

(h) Snowmachine (snowmobile) operation in Denali National Park and Preserve--(1) What is the definition of a traditional activity for which Section 1110(a) of ANILCA permits snowmachines to be used in the former Mt. McKinley National Park (Old Park) portion of Denali National Park and Preserve? A traditional activity is an activity that generally and lawfully occurred in the Old Park contemporaneously with the enactment of ANILCA, and that was associated with the Old Park, or a discrete portion thereof, involving the consumptive use of one or more natural resources of the Old Park such as hunting, trapping, fishing, berry picking or similar activities.
Recreational use of snowmachines was not a traditional activity. If a traditional activity generally occurred only in a particular area of the Old Park, it would be considered a traditional activity only in the area where it had previously occurred. In addition, a traditional activity must be a legally permissible activity in the Old Park.

(2) May a snowmachine be used in that portion of the park formerly known as Mt. McKinley National Park (Old Park)? No, based on the application of the definition of traditional activities within the park to the factual history of the Old Park, there are no traditional activities that occurred during periods of adequate snow cover within the Old Park; and, thus, Section 1110(a) of ANILCA does not authorize snowmachine access. Hunting and trapping were not and are not legally permitted activities in the Old Park at any time of the year. Sport fishing has not taken place in the Old Park during periods of adequate snow cover due to weather conditions that are adverse to sport fishing, and the limited fishery resources within the Old Park. During periods of adequate snow cover, berry picking is not feasible, and has not taken place in the Old Park. Under the definition, recreational use of snowmachines is not a traditional activity. There

are no villages, homesites or other valid occupancies within the Old Park. Access by snowmachine through the Old Park in transit to homesites, villages and other valid occupancies was not lawful prior to the enactment of ANILCA and is available through routes outside the Old Park that have been historically used for that purpose. Therefore, the use of snowmachines is not authorized by section 1110(a) for such travel. Further, Congress did not authorize subsistence activities in the Old Park. In addition, the National Park Service has determined that the use of even a few snowmachines in the Old Park would be detrimental to the resource values of the area. Therefore, because no usage is authorized in the Old Park by section 1110(a) the Old Park remains closed to all snowmachine use in accordance with 36 CFR 2.18.

(3) Where can I operate a snowmachine in Denali National Park and Preserve? You can use a snowmachine outside of the Old Park for traditional activities or travel to and from villages and homesites and other valid occupancies as authorized by 43 CFR 36.11(c), or when lawfully engaged in subsistence activities authorized by Sec. 13.46.

(4) What types of snowmachines are allowed? The types of snowmachines allowed are defined in Sec. 13.1(q) under snowmachine or snowmobile.

(5) What other regulations apply to snowmachine use? Snowmachine use is governed by regulations at Sec. 2.18(a) of this chapter, traffic safety, Sec. 2.18(b) of this chapter, state laws, and Sec. 2.18(d) and (e) of this chapter, prohibited activities; and 43 CFR 36.11(a)(2) adequate snow cover, and 43 CFR 36.11(c) traditional activities.

(6) Who determines when there is adequate snow cover? The superintendent will determine when snow cover is adequate for snowmachine use. The superintendent will follow the procedures in Secs. 1.5 and 1.7 of this chapter to inform the public.

(7) Nothing in this section shall limit the authority of the superintendent to restrict or limit uses of an area under other statutory authority.

Appendix I: Definition Of Traditional

In applying the provisions of ANILCA as related to ''means of surface transportation traditionally employed" (section 811) and "the use of snowmachines . . ., motorboats, airplanes, and nonmotorized surface transportation methods for traditional activities'' (section 1110), the National Park Service has relied on the following definitions of "tradition(al)" from Webster's Third New International Dictionary of the English Language (unabridged), 1976:

2. The process of handing down information, opinions, beliefs, and customs by word of mouth or by example: transmission of knowledge and institution through successive generations without written instruction. . . .

3. An inherited or established way of thinking, feeling or doing; a cultural feature (as an attitude, belief, custom, institution) preserved or evolved from the past; usage or custom rooted in the past (as of a family or nation); as a (1): a doctrine or practice or a body of doctrine and practice preserved by oral transmission (2): a belief or practice of the totality of beliefs and practices not derived directly from the Bible. . . ,

5. (a) Cultural continuity embodied in a massive complex of evolving social attitudes, beliefs, conventions, and institutions rooted in the experience of the past and exerting an orienting and normative influence on the present (b) the residual elements of past artistic styles or periods.

The National Park Service recognizes that it would be valuable to pursue, with those affected, the refinement of this definition in the context of the legislative history. In the interim, the

Park Service will continue to use this definition in applying the above-referenced provisions of ANILCA. To qualify under ANILCA, a ‘ “traditional means” or “traditional activity” has to have been an established cultural pattern, per these definitions, prior to 1978 when the unit was established.

Appendix J: Monitoring and Mitigation

The various general management plan and implementing documents include required mitigation and monitoring among their provisions. This appendix summarizes these requirements.

Item	Plan
Backslopes and fill slopes would be covered with coarse materials to discourage colonization by invasive plants. Disturbed sites within the project area would be replanted with native vegetation. Measures would be taken to prevent invasive plant colonization. Soil and groundwater remediation of fuel oil contamination would be done.	2006 C-Camp Improvements
Backslopes and fill slopes will be covered with coarse materials to discourage colonization by invasive plants. Off-road construction equipment will be pressure-washed prior to entering the park. Park staff will identify and list invasive species of concern. Imported gravel and fill dirt will come from materials sites that are free from these target invasive species, or the materials will be heated (run through a dryer). Park staff will verify that the material sites were free of target invasive species prior to their use. Approximately 0.5 acres of disturbed lands (mostly not wetlands) will be revegetated with native plants after the completion of the construction activities. The DENA’s Resource Preservation and Research Division will perform all revegetation activities.	2006 Savage River Rest Stop
Vegetation mats that need to be moved from the trail surface would be saved and moved to abandoned trail segments. Periodic surveys would be conducted to determine the presence of exotic plants. Borrow pits would be developed where they would not be visible to hikers. When possible a borrow excavation would be re-filled with sub-standard soils removed from the trail tread.	2006 Savage Alpine and Triple Lakes Trails
Vista clearing may be necessary in future years to maintain mountain views from the new viewpoints.	2006 Savage River Rest Stop
The geotechnical investigation will be conducted while the ground is frozen and with adequate snow cover in order to minimize impacts to the soils. Best Management Practices (BMP) technologies will be used.	2006 Savage River Rest Stop

Vegetation mats that need to be moved from the project area would be saved and moved to areas around the visitor center site that need revegetation. Areas disturbed but not part of the finished trails would be restored with native vegetation.	2005 McKinley Station and Meadow View Trails
Landscaping and replanting native vegetation will occur around the new development area.	2004 Eielson Visitor Center and Toklat Rest Stop
If collection boxes are used for the hydro plant at Eielson, and in order to keep the riparian zone soils in the streambed east of Eielson at least damp, the boxes will be closed when dry conditions reduce the stream discharge to less than one and one-half times the pipe discharge.	2004 Eielson Visitor Center and Toklat Rest Stop
Trail maintenance will be limited to brush cutting.	2003 Construction of a Springtime Trail
Revegetate the dorm site after removal.	2001 Entrance Area EA
A trails and development nodes management plan would be established to guide rehabilitation of highly impacted areas and to prevent formation of new problem areas.	1997 Entrance Area and Road Corridor Development Concept Plan/EIS
To help compensate for irretrievable losses of wildlife habitat, the National Park Service will revegetate sites disturbed by visitor use or construction-related activities and will also restore to natural conditions an equivalent amount of acreage lost to development as a result of this plan (42.3 acres). Most of the acreage to be restored will occur on disturbed lands in the Kantishna area.	1997 Entrance Area and Road Corridor Development Concept Plan/EIS

Monitoring Vegetation, Soils and Groundwater

Item	**Plan**
Monitor trail and campsite disturbance. Variables to monitor would include bare ground, vegetation cover, soil compaction, physical damage to plants, and site characteristics, such as soil moisture and soil temperature.	2006 C-Camp Improvements
Periodic surveys would be conducted to determine the presence of exotic plants.	2006 Savage River Rest Stop
Periodic surveys will be conducted to determine the presence of exotic plants.	2006 Savage Alpine and Triple Lakes Trails
Annual level survey of gravel in the floodplain (Added by Carwile – I couldn't find this)	2006 Savage River Rest Stop

Sediment monitoring will provide a baseline of sediment conditions and early warning of excessive sediment release and Project Documentation will establish long term resource (hydrologic, geomorphic and vegetative) response to extraction activities and will be of interest to persons designing future similar projects or for review of this project.	2006 Savage River Rest Stop
Reclamation site inventories would be conducted for approximately two weeks each year by a 3 to 4 person crew. Reclamation research would also continue in the Glen Creek watershed with annual monitoring of previous work.	2005 McKinley Station and Meadow View Trails
A monitoring program will be implemented to track the long-term effects of calcium chloride on park resources, particularly vegetation, soils, and water.	2004 Eielson Visitor Center and Toklat Rest Stop
An exotic plants monitoring and control plan will be developed and implemented to minimize the spread of exotic vegetation.	2004 Eielson Visitor Center and Toklat Rest Stop
Conduct natural resources monitoring, surveys, and research. Monitoring of soil and vegetation impacts along trails and at development nodes would continue.	2003 Construction of a Springtime Trail
An exotic plants monitoring and control plan would be developed and implemented to minimize the spread of exotic vegetation along the road corridor.	2001 Entrance Area EA

Wetlands

Item	**Plan**
This Statement of Finding commits to full 2:1 compensation for the 0.7 acres of disturbed wetlands. Stream channel and floodplain restoration will be based on the techniques of the Glen Creek restoration project. Monitoring of the stream channel and riparian areas will occur to determine the success of the reclamation efforts. It is anticipated that the site will be a functional wetland within 3-5 years after treatment, and will be fully-functioning within 15 years. As much as possible, disturbance of wetlands in and around the project area would be avoided.	2006 C-Camp Improvements

Compensation will occur for the loss of 0.2 acres of palustrine wetland. One-for-one compensation will be completed elsewhere in the park by restoring a riverine and palustrine wetland in the Kantishna Hills region of the park. As much as possible, disturbance of wetlands in and around the project area will be avoided.	2006 Savage River Rest Stop
At least one rest site along the trail would be devoted to interpreting wetland/floodplain values of the area.	2005 McKinley Station and Meadow View Trails
At least one rest site along the trail would be devoted to interpreting wetland values of the area.	2004 Multi-purpose Entrance Area Trail
Compensation will occur for the unavoidable loss or disturbance of wetland area at gravel source sites over the next 10 years.	2003 Gravel Acquisition Plan
Reclaim and restore about 517 acres of disturbed floodplain and wetlands in 10 drainages in the Kantishna area.	2001 Reclamation EA

Wildlife and Habitat

Item	**Plan**
Vegetation (bird habitat) would not be removed during the nesting season, April 1 through July 15. If any active nest (intact eggs, live chicks, or presence of an adult on the nest) were encountered at any time, it would be protected from destruction.	2006 C-Camp Improvements
In an effort to reduce wildlife conflicts and displacement, agencies will conduct vegetation surveys and a bear habitat assessment prior to facility construction. .	2006 South Denali Implementation Plan
During project construction, the guidelines in the park's Bear-Human Conflict Management Plan will be followed.	2006 Savage River Rest Stop
Bird habitat (vegetation) will not be removed during the early nesting season, April 1 through April 30, unless the site was pre-approved by a park wildlife biologist. There will be no bird habitat removal May 1 through July 15. Eggs, chicks, or adults of wild birds will not be destroyed.	2006 Savage River Rest Stop
Active monitoring of the populations, distributions, and demographics (e.g., age structure, gender ratios) of major wildlife species would occur throughout the duration of plan implementation.	2006 Backcountry Management Plan

Helicopter activity will not be allowed until after the raptor nesting season, or July 15, unless the park raptor biologist certifies that no impact to raptors will occur form an earlier flight.	2005 Seismometer Installation at Castle Rocks
The NPS would follow established guidelines in the park's bear-human conflict management plan.	2005 McKinley Station and Meadow View Trails
Staff will monitor the sheetpile at Toklat to see if additional mitigation measures are needed to support wildlife movement from the floodplain to the uplands. Road building and maintenance activities would be authorized only at times not critical for breeding or migrating birds and fish and to avoid unnecessary adverse impacts to fish habitat as specified in a permit issued by the Alaska Department of Fish and Game.	2004 Eielson Visitor Center and Toklat Rest Stop 2002 Spruce Creek EA
Vehicular travel through Moose Creek and its tributaries would be reduced during critical fish migration and spawning periods, usually in May and early June.	2002 Spruce Creek EA
The NPS would continue to monitor human-wildlife interaction. Activities determined to have an adverse affect on wildlife resources would be modified or eliminated.	1997 Entrance Area and Road Corridor Development Concept Plan/EIS

Visual Resources and Visitor Experience (Design and Construction)

Item	**Plan**
The ESB would be designed to fit with the natural surroundings and sited to reduce its visibility from the Park Road.	2006 C-Camp Improvements
The proposed facilities will be designed to fit with the natural surroundings. Construction activities will be conducted in a manner to minimize impact on visitor use and recreation. Minimize the Development Zone and limit it to the existing and planned development area, thereby maximizing the Backcountry Day Use Zone.	2006 Savage River Rest Stop
During trail construction, visitors in the area would be directed to use the new multi-purpose trail or free shuttle bus to connect between the Visitor Center and Riley Creek Campground area.	2005 McKinley Station and Meadow View Trails

Radio antennas will be reduced in size and will be located near the mechanical building.	2004 Eielson Visitor Center and Toklat Rest Stop
Vegetative buffers approximately 30 to 40 feet in width would be established or maintained between the Denali Park Road and parking areas and new structures to minimize adverse visual impacts to park visitors.	2001 Entrance Area EA

Cultural Resources

Item	Plan
Project excavations would be monitored by cultural resource staff. If previously unknown cultural resources are located during construction, the project would be stopped in the discovery area until cultural resource staff could determine the significance of the finding and recommend appropriate courses of action.	2006 C-Camp Improvements
Project excavations will be monitored by cultural resource staff.	2006 Savage River Rest Stop
If previously unknown cultural resources were located during construction, the project would be halted in the discovery area until cultural resource staff could determine the significance of the finding. The NPS will remap the cultural resources along the McKinley Station Trail west of the Alaska railroad trestle and will present a plan for protection and interpretation of those resources to the State Historic Preservation Officer for approval before construction work on that area of the trail will take place.	2005 McKinley Station and Meadow View Trails
Conduct cultural resources monitoring, surveys, and research.	1997 Entrance Area and Road Corridor Development Concept Plan/EIS

Fire Management

Item	Plan
NPS staff will devise a site protection plan for each backcountry structure. Re-treatment will be necessary the first year after initial removal and roughly every two to five years thereafter.	2003 Hazardous Vegetative Fuel Reduction

Item	Plan
Construction would be restricted to the minimum area required. Best management practices (BMPs) would be used during construction to minimize potential erosion and sedimentation. A program to reduce dust and soil loss would be instituted, as appropriate, for excavation, grading, construction, and other dust-generating and soil-disturbing activities. Appropriate water and energy conservation technologies, sustainable practices, and materials recycling would be incorporated into the design and construction of the proposed facilities.	2006 South Denali Implementation Plan
Vegetation removed during construction would be salvaged to the extent possible for use in restoring areas disturbed by construction. A disturbed area revegetation plan would be formulated that would require the use of native species. A monitoring plan would be developed and implemented to ensure revegetation is successful, plantings are maintained, and unsuccessful plant materials are replaced.	2006 South Denali Implementation Plan
During the main summer season, Alaska Department of Natural Resources would restrict vehicular access on the new access road.	2006 South Denali Implementation Plan
Parking areas at Rabideux Creek, Parks Highway MP 121.5, Parks Highway MP 122, and campgrounds near the Forks Roadhouse and Parks Highway MP 134.6 would be expanded in phases depending on availability of funds and demand, as determined by the agencies. If unacceptable resource damage or conflicts occur as a direct result of expanding parking lots or developing campgrounds, the size of the lot or campground would not be increased further until resource damage or conflicts are mitigated.	2006 South Denali Implementation Plan

To reduce impacts from ORV use on natural resources in the South Denali region, measures would be taken at new and expanded trailheads and parking areas (including, but not limited to, Parks Highway MP 122) to control access and use during summer. Minimum-impact information targeted to ORV users would be provided at all new and existing trailheads, parking areas, and pullouts in the planning area along the Parks Highway and Petersville Road (including the Forks Campground and Kroto Creek parking lot) where agency staff believe signage would be beneficial in protecting natural resources.	2006 South Denali Implementation Plan
Trails would be designed and constructed concurrently with the other facilities so that social trails will be less likely to form.	2006 South Denali Implementation Plan
Agencies will adhere to the statewide timing guidelines for migratory bird nesting which are prepared by U.S. Fish and Wildlife Service.	2006 South Denali Implementation Plan
Measures would be taken to reduce the potential for bear/human encounters.	2006 South Denali Implementation Plan
If any previously unknown archeological remains were discovered during construction, all work would be halted in the discovery area until the significance of the finding could be determined by cultural resource staff. Curry Lookout would be evaluated and repaired to ensure that the building is in stable and good condition.	2006 South Denali Implementation Plan

Kantishna (also see Wetlands section)

Item	**Plan**
The rockfall on lower Eldorado Creek that is removed to allow vehicular access up the former mining route will be replaced by the NPS to insure that subsequent vehicular traffic is blocked from impeding natural recovery of the floodplain.	2006 South Denali Implementation Plan
A bond would be required of the claimant to cover re-closing the adit, for removing any supplies or equipment brought in for this sampling, and for restoring any flattened out land surfaces to their present irregular contours.	2006 South Denali Implementation Plan

Several small to medium-sized former extraction sites and the Downtown Kantishna site, a large area disturbed by historic placer mining, would be available for reclamation to mitigate the visual and ecological impacts of expanding existing or developing new extraction sites. The NPS could restore a total of about 65 previously disturbed acres by contouring (including using project reject material), scarifying, and revegetating the sites with appropriate plant materials.	2006 South Denali Implementation Plan

Backcountry (Rangers and Social Science)

Item	Plan
Monitoring for evidence of modern human use would be conducted at least once every five years by visitor survey, and would be supplemented by continuous observation of ranger patrols.	2006 Backcountry Management Plan
Monitoring for litter and human waste would be conducted at least once every five years by survey of backcountry visitors. This information would be supplemented by the observations of park staff during backcountry patrols.	2006 Backcountry Management Plan
Sound monitoring would be conducted on a continuous basis using remote monitors. Long-term monitoring and attended monitoring would take place at locations of particular concern or where it has been determined that management action is necessary to meet standards. Other locations would be randomly sampled.	2006 Backcountry Management Plan
Monitoring encounters with people would be conducted at least once every five years by survey of backcountry visitors and "displaced" backcountry visitors. This information would be supplemented by the observations of park staff during backcountry patrols.	2006 Backcountry Management Plan
Monitoring camping density would be conducted at least once every five years by survey of backcountry visitors. This information would be supplemented by observations of park staff during backcountry patrols.	2006 Backcountry Management Plan

Ranger patrols would record and report visitor contacts. Visitor surveys would assess the amount and quality of interactions between visitors and NPS rangers and researchers at least once every five years.	2006 Backcountry Management Plan
Use at Stony will be carefully monitored and managed by NPS and Joint Venture to minimize additional impacts to park resources.	2004 Eielson Visitor Center and Toklat Rest Stop
Surveys would be conducted at regular intervals to gauge visitor satisfaction levels, activity patterns, perceptions, and development needs for the frontcountry area.	1997 Entrance Area and Road Corridor Development Concept Plan/EIS

Permitting

Item	**Plan**
A Research Permit will detail the permitted station location, limits of installation, and use of the NPS facilities and other locations to safely manage fuel and landing of helicopters in the park.	2005 Seismometer Installation at Castle Rocks
NPS and UAF-GI will keep records of the number of helicopter trips used to install and maintain the seismic station. The helicopter will avoid flying over designated Wilderness west of the Wonder Lake area to the extent possible to preserve wilderness resource values.	2005 Seismometer Installation at Castle Rocks
Helicopter access will not be permitted for the long term maintenance program for any sites within the existing Denali Wilderness.	2003 Hazardous Vegetative Fuel Reduction
When conditions allow, the NPS encourages the owners to follow FAA Advisory Circular 91-36C to fly at least 2,000 feet elevation above ground surface except when landing or during takeoff to minimize adverse noise impacts to wildlife or people on the ground.	2002 Spruce Creek EA

Park Road

Item	Plan
External source sites will be used for mineral materials along the first three road segments (to mile 37) where it is economically and environmentally preferable to do so, and large volumes will be stockpiled near project sites during the shoulder seasons, when feasible, to avoid impacts to park visitors along the park road.	2003 Gravel Acquisition Plan
The NPS will seek to reduce maintenance gravel needs through wider application of dust palliatives, careful grading and reuse of gravel lost over the sides of the road, and investigation of road construction techniques that would reduce long-term gravel needs and still be allowed under the Front Country EIS and road character analysis.	2003 Gravel Acquisition Plan
Palliative application will be restricted to the roadbed and will not be applied on adjacent resources and will not occur on the roadbed adjacent to areas of known sensitive resources, including where the road is adjacent to wetlands and ponds. Application will not occur during rainy or windy conditions. Palliative application will not occur where the road surface material is inherently slick, or where the road alignment slows traffic flow, such as in steep and curved areas. Gravel hauling, road crowning, and palliative application will occur at night, when possible, to minimize impacts to visitors.	1999 Dust Abatement Activities
Park staff will continue to work to reduce the amount of calcium chloride introduced in the park by testing lower application rates and different application techniques.	1999 Dust Abatement Activities
Experimentation with application strategies will occur to ensure minimal application rates.	1999 Dust Abatement Activities
Park staff will continue to search for new alternative palliative products.	1999 Dust Abatement Activities

Appendix K: Minimum Requirement Procedure

STEP 1 – DETERMINING THE MINIMUM REQUIREMENT

SHEET 1

Is Administrative Action Needed?
What is the problem/issue that may require administrative action? Do not include methods or tools here. This sheet only refers to the issue or problem, not proposed action/project, or tools to be used. Include references from other legislation, policy, or plans, decisions, analyses, and how this issue is addressed in those documents.

Briefly describe the issue/problem:

The following questions assist in analyzing whether the issue needs to be resolved in wilderness. Do not consider what tools are to be used here. Please circle Yes or No, and explain your reasoning:

1. Is this an emergency? **Yes** **No** If yes, follow established procedures for Search and rescue (SAR), fire or other plans/policies. If no, please continue.

2. Is this problem/issue subject to valid existing rights, such as access to valid mining claim, state lands, etc? **Yes** **No**
If no, continue with Sheet 1.
If yes, briefly explain here and then proceed to Sheet 3

3. Can the problem/issue be addressed by administrative actions outside a wilderness area? (For example, the administrative actions could be an information program at the visitor center or trailhead instead of a physical action in the wilderness, etc) **Yes** **No**
If yes, conduct actions outside wilderness. If no, continue with Sheet 2.

4. Is there a special provision in legislation (the 1964 Wilderness Act or subsequent laws), that allows this project or activity? (For example, maintenance of dams or water storage facilities, access to private inholdings, etc.) **Yes** **No** If yes, Go to SHEET 3; if no, Go To SHEET 2.

STEP 1: DETERMINING THE MINIMUM REQUIREMENT (Continued)

SHEET 2

Is Administrative Action Needed? (Continued)
The following questions are provided to evaluate whether resolving the issue protects wilderness character and values identified in the Wilderness Act. Answer the questions in terms of the need to resolve the issue/problem. If the answer to most of the questions is yes, then the issue/problem probably requires administrative action. Please circle Yes or No for each answer, and briefly explain.

1. If the issue/problem is not resolved, or action is not taken, will the natural processes of the wilderness be adversely affected?

   Yes **No** **Why/How?**

2. If the issue/problem goes unresolved, or action is not taken, will the values of solitude or primitive and unconfined type of recreation be threatened?

   Yes **No** **Why/How?**

3. If the issue/problem goes unresolved or action is not taken will evidence of human manipulation, permanent improvements, or human habitation be substantially noticeable?

   Yes **No** **Why/How?**

4. Does addressing the issue/problem or taking action protect the wilderness as a whole as opposed to a single resource?

   Yes **No** **Why/How?**

5. Does addressing this issue/problem or taking action contribute to protection of an enduring resource of wilderness for future generations?

   Yes **No** **Why/How?**

6. Is this an issue for reasons other than convenience or cost of administration?

   Yes **No** **Why/How?**

If administrative action is warranted, then proceed to Sheet 3 to determine the minimum tool or method for resolving the problem.

STEP 2: DETERMINIMG THE MINIMUM TOOL

SHEET 3: Determining the Minimum Tool: Fill out a Sheet 3 for each alternative.

Identify and describe a range of alternatives including those that utilize traditional tools and non-motorized and mechanized means as well as other methods.

.

Alternative # _____

Describe briefly or attach description:

Circle yes or no:

Does this alternative involve:		
use of temporary road?	**Yes**	**No**
use of motor vehicles?	**Yes**	**No**
use of motorized equipment?	**Yes**	**No**
use of motorboats?	**Yes**	**No**
landing of airplanes?	**Yes**	**No**
landing of helicopters?	**Yes**	**No**
use of mechanical transport?	**Yes**	**No**
creating a structure or installation?	**Yes**	**No**
Other impacts to wilderness character?		
_____	**Yes**	**No**

The next set of descriptions may be put on Optional SHEET 3a, if desired:

Describe the biophysical effects/benefits of this alternative:

Describe the social/recreation effects/benefits:

Describe societal/political effects/benefits:

STEP 2: DETERMINING THE MINIMUM TOOL

Sheet 4: Selection of the Minimum Tool Alternative

Attach all alternative sheets to this summary page.

SHEET 4: Selection of the Minimum Tool Alternative
Attach all alternative sheets to this summary page.

What is the method or tool that will allow the issue/problem to be resolved or an action to be implemented with a minimum of impacts to the wilderness?

The selected alternative is # _____.

Describe the specific operating requirements for the action. Include information on timing, locations, type of actions, etc. (Use this space or attach a separate sheet.)

What are the maintenance requirements?

What standards and designs will apply?

Develop and describe any mitigation measures that apply.

What will be provided for monitoring and feedback to strengthen future effects and preventative actions to be taken to help in future efforts?

Approvals:
Prepared by: _____ Date: _____
Recommended by: _____ Date: _____
Recommended by: _____ Date: _____
Approved by: _____ Date: _____

Appendix L: Land Protection Plan [1]

SUMMARY

Table L-1: Current ownership (acres):

Ownership	1986	2007
Federal	5.958,025*	6,000,760
Non-Federal	2,597**	30,322
Land Under Application	67,979	43,948
Total	6,028,091	6,075,030

Number of tracts remaining to be protected	527	64

* (Mistakenly) includes 510 acres of State shoreline along Tokositna R.

** (Mistakenly) does not include 510 acres of State shoreline along Tokositna R.

Table L-2: Methods of protection proposed (acres*):

Methods of protection proposed	1986	Remaining in 2007
fee-simple acquisition through exchange, donation, or purchase	85,292	66,044
acquisition of surface estates through exchange, donation, or purchase	627	123
acquisition of mineral interest through exchange, donation, or purchase	1,300	0
acquisition of scenic habitat easements through exchange, donation, or purchase	27,954	1,594
fee-simple acquisition of state lands currently outside the park boundary	95,000	91,570
cooperative agreement		4,172
zoning	0	0
regulation	5,290	40
adequately protected	1,248	2,297

*The acreages listed in this section exceed the total nonfederal land acreage because they include mineral interests on federal lands.

Statutory acreage ceiling: 0

[1] The Land Protection Plan has not been updated since it was completed in 1986. Changes in land status for parcels identified in 1986 have been indicated, statistics updated, and the references harmonized with the bibliography to provided current status. However, other information in this appendix, particularly for lands outside of park boundaries, reflects the original 1986 text and is in some case significantly out of date.

Table L-3: Funding status as of:

	December 1, 1984	December 1, 2007
Authorized acquisition ceiling:	0	
Appropriated to date:	0	$12,634,700
Obligated to date:	0	$12,403,937
Unobligated balance:	0	$230,763

Top priorities: Wolf townships, Kantishna Hills surface estates

INTRODUCTION

In May 1982 the Department of the Interior issued a policy statement for use of the federal portion of the Land and Water Conservation Fund which requires that, in carrying out its responsibility for land protection in federally administered areas, each agency using the fund will follow the procedures listed below:

> Identify what lands or interests in land need to be in federal ownership to achieve management purposes consistent with the public objectives for the unit.
>
> Use to the maximum extent practical cost-effective alternatives to direct federal purchase of private lands and, when acquisition is necessary, acquire or retain only the minimum interests necessary to meet management objectives.
>
> Cooperate with landowners, other federal agencies, state and local governments, and the private sector to manage land for public use and resource conservation.
>
> Formulate, or revise as necessary, plans for land acquisition and resource use or protection to ensure that socio-cultural impacts are considered and that the most outstanding areas are adequately managed.

In response to this policy, the National Park Service requires that a land protection plan be prepared for each unit of the national park system that contains private or other nonfederal lands or interests in land within its authorized boundary. The guiding principle of each land protection plan is to ensure the protection of that unit of the national park system consistent with the stated purpose for which it was created and administered. Land protection plans are intended to accomplish several tasks:

> Determine what lands or interests in land need to be in public ownership and what means of protection other than fee acquisition are available to achieve the purpose of the unit as established by Congress.
>
> Inform landowners of National Park Service intentions to buy land or protect it through other means.
>
> Help managers identify priorities for making budget requests and allocating available funds to protect land and unit resources.

Find opportunities to help protect the unit by cooperating with state or local governments, landowners, and the private sector.

A major issue addressed by this plan is the potential for increased traffic an the park road associated with new visitor accommodations that might be built on private lands in the Kantishna Hills. It has been demonstrated that traffic causes avoidance behavior by some wildlife, and one of the objectives of the general management plan is to reduce traffic levels on the road (see the discussion of visitor use and general development in the "General Management Plan" section of this document [2)]. Another issue is the protection of important habitat for caribou and wolves that inhabit lands inside the park for much of the year but also utilize adjacent lands.

This plan does not constitute an offer to purchase lands or interests in land; neither does it diminish the rights of nonfederal landowners. The plan is intended to guide subsequent land protection activities subject to the availability of funds and other constraints.

The land protection plan will be reviewed every two years by the superintendent to determine if revisions are required. The superintendent will maintain current land status information, which will be available for review at the park headquarters. If the plan requires revision other than routine updating of land status information, all affected landowners and the general public will be notified and provided a 60-day public comment period.

PURPOSE OF THE PARK AND RESOURCES TO BE PROTECTED

SIGNIFICANCE AND PURPOSE OF THE PARK

Denali National Park and Preserve encompasses an internationally significant subarctic ecosystem that serves as a baseline for the study of comparable environments around the world, The original purposes in establishing the park in 1917 were to preserve wildlife, "natural curiosities, and scenic beauties" for the benefit and enjoyment of the people. These purposes were reinforced by ANILCA when the park was enlarged in 1980. A more detailed description of the legislated purposes of the park is provided in appendix 8. [3]

RESOURCE DESCRIPTION

Denali is primarily a natural area known for its outstanding Alaskan wildlife and the highest mountain in North America. A detailed description of the park's resources is contained in the "Affected Environment" section of this document. [4]

LEGISLATIVE AUTHORITIES

Passage of ANILCA provided a general framework for land protection for the newly established conservation units in Alaska. Section 1302 contains the general authorities for land acquisition. The secretary of the interior is authorized to acquire, by purchase, donation,

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[2] Reference is to the 1986 GMP. This discussion is in the Transportation and Access section of this consolidated GMP document.

[3] Reference is to the 1986 GMP. This discussion is in the Park Purpose and Significance section of the consolidated GMP document.

[4] Reference is to the 1986 GMP. This section is not included in this consolidated GMP.

exchange, or otherwise, any lands or interests in land within the park and preserve. However, any lands or interests in land owned by the state and local governments or by native village and regional corporations may be acquired only with the consent of the owners. In addition, lands owned by natives, allotted under the Alaska Native Claims Settlement Act, who received title to the surface estate of lands from a village corporation as a primary place of residence, business, or subsistence campsite (section 14(c)(1)) or from the secretary of the interior as a primary place of residence (section 74(b)(5)) may be acquired only with the consent of the owner unless the secretary determines that the land is no longer being used far the purpose for which it was conveyed and that the use is or will be detrimental to the purposes of the preserve.

Native allotments or other private small tracts may be acquired without consent only after offering an exchange for other public lands of similar characteristics and like value and if the owner chooses not to accept the exchange. Exchanges are complicated by selections and past conveyances of lands within the state and by the lack of suitable substitute lands.

No improved property may be acquired without the consent of the owner unless the acquisition is necessary for the protection of resources or for protection of the values listed in ANILCA. When an owner of improved property consents to exchange lands or to sell to the United States, the owner may retain a right of use and occupancy for noncommercial residential and recreational use by agreement with the National Park Service.

Section 1302(i)(1) and (2) of ANILCA authorizes the secretary of the interior to acquire, by donation or exchange, state-owned or validly selected lands that are contiguous to the park. Any lands so acquired will become part of the conservation unit without reference to the 23,000-acre restriction included in minor boundary adjustments as defined in section 103(b).

Section 103(c) states that only the public land within the boundaries of any conservation system unit is included as a portion of the unit. The state, native, and other private lands within the boundaries are not subject to regulations applicable solely to the federal lands. If conveyed to the federal government under the provisions cited above, such lands become part of the preserve and are subject to the federal regulations.

In addition to complying with the above legislative and administrative requirements, the National Park Service must administer the area as a unit of the national park system pursuant to the provisions of the act of August 25, 1916 (39 Stat. 535) as amended and supplemented, and in accordance with the provisions of title 16 of the United States Code, title 36 of the Code of Regulations, and other applicable laws. The National Park Service has jurisdiction over federally owned lands in the unit.

RESOURCE MANAGEMENT AND VISITOR USE OBJECTIVES

The general management plan proposes to protect sensitive wildlife habitat on the north side of the Alaska Range by decreasing vehicle traffic. Increases in visitor use will be accommodated by increasing buses on the park road as private vehicles are reduced and studies confirm that such increases are permissible, and by opening up a second visitor service and activity center on the south side of Denali. Natural resources will be monitored, and activities found to have an adverse effect on resource values will be modified or eliminated. These proposals are described in more detail in the "General Management Plan" section of this document. [5]

Specifically, the land protection objectives at Denali are to preserve and protect the park's natural and cultural values from the adverse effects of incompatible activities and to protect the visitor experience from intrusive development. Resources that are particularly susceptible to damage and therefore most in need of protection are wildlife habitat, water quality, scenic quality, and recreational value.

LAND OWNERSHIP AND USES

CURRENT LAND STATUS INSIDE THE PARK AND PRESERVE BOUNDARY [6]

At the present time 70,576 acres [7] of land within the boundaries of Denali National Park and Preserve is either in nonfederal ownership or under application. These nonfederal lands or interests are owned or held by the state of Alaska, Alaska native regional and village corporations and groups, and private individuals (table L-4). State lands account for 10 percent of these nonfederal lands. An additional 8,400 acres, more or less, of unpatented mining claims exist within Denali. While the surface estates of unpatented mining claims are retained in federal ownership, these lands remain encumbered by mineral rights. Rights-of-way for the Alaska Railroad and the George Parks Highway traverse the eastern edge of the park.

For the most part the nonfederal lands are concentrated in three specific areas of the park. The Kantishna Hills contain 292 patented and unpatented mining claims and some small tracts of private land. The Cantwell/Dunkle Mine area contains 163 unpatented mining claims along with state and regional and village corporation lands under application. An area near Lake Minchumina in the preserve contains state, regional corporation, and native group lands under application (some covering entire townships) and some small tract entries and cemetery sites. The state submerged lands of concern in Denali are the navigable portions of the Tokositna, Kantishna, and Muddy rivers. These lands are shown generally on the Land Status map[8]. Individual tracts are listed in appendix L. [9]

COMPATIBILITY OF LAND USES

The National Park Service is required to examine existing and potential uses of nonfederal lands within the park and preserve to determine if these uses are compatible with the purposes for which the unit was established (ANILCA, section 1301).

The following lists of compatible and incompatible uses of nonfederal lands in the park and preserve are presented to publicly inform landowners about what uses of nonfederal lands are generally compatible with the purposes of the unit and what uses will cause the National Park Service to initiate actions to protect park and preserve resources and values. These lists are intended to serve as general guidelines for both park managers and nonfederal landowners.

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[5] Reference is to the 1986 GMP. This discussion is in the Transportation and Access section of this consolidated GMP document.

[6] Specific acreage examples in this section have changed since 1986. See the Table L-4 for details.

[7] As of December, 2007, there were 74,270 acres of non-federal land or land under application.

[8] An overall "Land Status map" is not contained in this document, but non-federal lands are depicted on individual area maps.

[9] This itemized listing is below in Table L-5.

Because all possible uses of nonfederal lands cannot be anticipated, and because other compatible and incompatible uses may exist, the following lists are not intended to be all-inclusive.

Compatible Uses

- o residential, recreational, or subsistence activities that do not adversely affect wildlife or other values on adjacent federal lands
- o repair, replacement, or minor modification of existing structures whose appearance blends with the undeveloped character of adjacent federal lands
- o limited construction of new structures whose appearance blends with the undeveloped character of adjacent federal lands

Incompatible Uses

- o activities that damage or contribute to damage of archeological or historical resources (e.g., increased recreational use, artifact collection, new construction)
- o activities that result in water pollution, sedimentation, or other impairment of fish spawning, rearing, feeding and overwintering habitat, or other surface or ground waters (e.g., logging, mining, waste disposal)
- o surface-disturbing activities that disrupt drainage patterns, accelerate erosion, and increase runoff and sediment loads, or which unduly change the visual character of the park and preserve (e.g., construction of roads and airstrips)
- o activities that impair wildlife's use of habitat on adjacent federal land (e.g., land disposals for residential or commercial use, habitat manipulations affecting distribution of wildlife),
- o hunting or trapping that impairs the natural condition of wildlife populations on adjacent federal lands
- o disposal of refuse in a manner that attracts bears, pollutes water resources, or otherwise impairs public health and safety
- o blocking public access when and where no other feasible options for public access occur (e.g., no easements to key beach areas or other features)
- o major new commercial development or subdivision of land that would promote major land use changes

Table L-4: Land Status

General		1986	2007
	National Park National Preserve	4,716,726 1,311,365	4,740,912 1,334,118
	Total Park & Preserve	6,028,091	6,075,030
	Park Wilderness Preserve Wilderness	2,124,783 0	2,126,101 0
	Total park & preserve wilderness	2,124,783	2,126,101

Ownership Summary			
Park	Federal Nonfederal Land under application	4,699,183 1,797 15,746	4,722,864 2,525 15,523
Preserve	Federal Nonfederal Land under application	1,258,332 800 52,233	1,277,896 26,731 29,491
Total	Total federal Total nonfederal Total land under application	5,957,515 2,597 67,979	6,000,760 30,638 43,632
Denali National Park	**Nonfederal Interests**		
	State of Alaska (application)	5,663	5,347
	State of Alaska, navigable waters/shoreIands - Tokositna River (within T30N R6W)	50	50
	Ahtna Regional Corporation (patent or interim conveyance)	375	375
	Ahtna Regional Corporation, ANCSA 12c 14h8 (application)	7,860	9,242
	Cantwell Village Corporation 12b (application)	1,382	combine w/ Ahtna
	2 cemetery/historical sites (application)	185	186
	3 headquarters sites (patent)	15	30
	2 homesites (patent)	10	10
	1 homestead settlement (patent)	15	0
	14 mineral patents (34 lode claims)	667	89
	3 mineral patents (9 placer claims)	178	34
	1 small tract sale (patent)	5	5
	1 small tract lease (patent)	5	5
	3 trade and manufacturing sites (patent)	194	194
	2 privately held parcels (part of mineral patent no. 0123470)	<1	<1
	~~State of Alaska and Cantwell Village Corporation~~ (overlapping application)	478	478

	State of Alaska Mental Health Lands	0	316
	Total nonfederal interests	**17,543**	**16,361**
	Major Waters		
	Bearpaw River, from mouth to ~~Glacier Creek (BLM advisory)~~ Diamond	540	270
	Wonder Lake	630	0
	Total major waters	**1,170**	**270**
	Other Nonfederal Interests		
	State of Alaska/Alaska Railroad right-of-way (exclusive use easement)	835	835
	State of Alaska highway right-of-way	omitted	423
	University of Alaska mineral interests in 5 previously patented claims (Stampede Mine)	71	0
	257 lode mining claims (unpatented)*	5,020	40
	169 placer mining claims (unpatented)*	3,380	118
	Total other nonfederal Interests	**9,306**	**1,416**
Denali National Preserve	**Nonfederal Interests**		
	State of Alaska ~~(application)~~	640	640
	Doyon Regional Corporation, ANCSA 14h8 (application)	22,662**	22,662
	Doyon Regional Corporation ~~(application)~~	25,181	25,181
	Minchumina Native, Inc. (native group application) (acreage correction)	3,010	3,185
	1 cemetery/historical site (application)	630	629
	6 7 native allotments (10 11 parcels, approved or conveyed)	800	910
	1 native allotment (1 parcel, application)	110	160
	Total nonfederal interests	**53,033**	**53,367**
	Major Waters		
	Chilchukabena Lake***	2,145	
	Kantishna River (BLM advisory)	1,895	2,855
	Muddy River (BLM advisory)	1,230	incl. above
	Total major waters	**5,270**	**2,855**

*Based on 20 acres per claim.
**Includes 1,030 acres lying within Chilchukabena Lake
***Includes 1,030 acres under Doyon ANCSA 14h8 application.

Native Regional and Village Corporations. ANCSA established native shareholder corporations and enabled them to make applications for land selections. Two regional corporations – Doyon, Limited, and Ahtna, Incorporated – have made prior-right applications for lands within Denali National Park and Preserve, but only a small portion of these lands have been conveyed. ANILCA, section 906(a), provides that "at such time as the entitlement of any Native Corporation to land under the Alaska Native Claims Settlement Act is satisfied, any land within a conservation unit selected by such Native Corporation shall, to the extent that such land is excess of its entitlement, become part of such unit and administered accordingly."

Doyon has developed long-term plans for its selected lands if conveyance takes place. The corporation has indicated an interest in developing tourist recreational facilities within the next 10 to 15 years in the vicinity of Lake Chilchukabena, where access would be provided by float planes. Planning is in a very early stage, but managers foresee developing a large lodge facility rather than cabin sites, if warranted by future demand.

Ahtna currently has no plans for its application lands within the park boundary. Park managers believe these sections, and also the sections selected by the Cantwell Village Corporation (which has since merged with the regional corporation) will be relinquished.

The Minchumina native group has selected several sections within the preserve boundary. Potential uses of group selections will likely concentrate on subsistence use, but they may include commercial guiding or development.

Small Private Tracts. Existing uses of the scattered small tract entries include a mountaineer staging camp in the Ruth Amphitheater, recreational lodges in the Kantishna area, homesteads, cabin sites, and subsistence activities. Future uses of these tracts could include additional private or commercial development. The uses of these tracts at present levels and for existing purposes are deemed compatible and are not seriously affecting park resources. Any additional traffic on the park road may have an adverse effect on wildlife and wildlife viewing.

Native Allotments. Applications for parcels up to 160 acres within the preserve have been filed under the 1906 Alaska Native Allotment Act. Uses of these lands by their owners may include private and commercial development and use of renewable resources, but not development of coal, oil, or gas. To date these allotments have occasionally been used for subsistence and recreational purposes.

Cemetery/Historic Sites (ANCSA 14(h)(l) sites). Three sites within the park and preserve have been selected based on their importance to native cultural heritage. However, since the lands containing the selections were already reserved at the time of the selection, it appears that they will not be conveyed and will remain in federal ownership.

State of Alaska. The Submerged Lands Act of 1953 and the Alaska Statehood Act of 1958 provide for state ownership of the beds of navigable waters to the "ordinary high water mark." Determination of what waters are navigable is an ongoing process in Alaska at both administrative and judicial levels. A 4-mile segment of the Tokositna River has been determined to be navigable, and title therefore lies with the state of Alaska. The matter of navigability of por-

tions of the Kantishna and Muddy rivers is still in adjudication. If portions are determined to be navigable, ownership of the submerged lands will lie with the state. Potential uses of state-owned submerged lands include gravel extraction, placer mining, and oil and gas development. The state has applied for adjacent lands along the eastern boundary of the park and adjacent lands in the Minchumina region. The state has no plans at present to subdivide these selections if they are conveyed (ADNR 1984c). Future uses could include subdivision, commercial development, and oil, gas, or mineral development,

Mining Claims. Existing and potential mining and mineral development in the Kantishna Hills/ DunkIe Mine area are addressed extensively in two documents: the Environmental Overview and Analysis of Mining Effects (NPS 1981) and the Final Environmental Impact statement, Kantishna Hills/Dunkle Mine Study (USDI 1984). The latter document was prepared for the Alaska Land Use Council by an interagency work group and examines several alternatives for future uses of the mining areas. Based on this study the Alaska Land Use Council has recommended the implementation of a mineral leasing program for the Kantishna Hills area and has recommended status quo management for the Dunkle Mine area on the south side of the Alaska Range. These recommendations have been forwarded to Congress. The implementation of a mineral leasing program would require an act of Congress, since the park and preserve are currently closed to ail forms of new mineral entry. Until such time as Congress may act upon the recommendations of a the council, both the Kantishna Hills and Dunkle Mine areas will continue to be managed according to existing applicable laws and regulations.

The assumption is made in the environmental impact statement on the Kantishna Hills/Dunkle Mine study that if mining is increased substantially on existing patented and unpatented mining claims in the Kantishna Hills, a new mining access road will be required to handle the additional mining traffic between the state highway system and the Kantishna Hills. As stated in the environmental impact statement, "this access route would require applying title XI of ANILCA and necessary additional environmental analysis and compliance with the National Environmental Policy Act for the project. Title XI requires all feasible access corridors to be evaluated, and an additional EIS would have to be prepared." The National Park Service does not support either an expanded mineral leasing program or a new mining access road.

EXTERNAL CONDITIONS AFFECTING LAND PROTECTION

The National Park Service may not acquire interests in land outside the unit with two exceptions: Section 103(b) of ANILCA provides for minor boundary adjustments up to 23,000 acres, and section 1302(i) allows for the acquisition of contiguous state lands through exchange or donation. Protection of resources and the visitor experience can be affected by adjacent land uses in a positive way, if the uses are compatible with the purpose of the park, or in a negative way if they are incompatible.

Activities occurring outside the park and preserve boundary which could affect resource protection and visitor use include mining, oil and gas exploration and development, state and Federal land disposal and subsequent future development, transportation development, the construction of the Susitna hydroelectric project and related utilities, and future activities on adjacent native lands. None of the potential problems identified in this section are expected to seriously affect park resources in the next two years, which is the time frame for land protection recommendations. Appropriate responses to external influences will be determined if potential problems materialize, and the "Land Protection Plan" will be revised every two years to reflect new management needs and priorities.

The National Park Service will continue to monitor activities in areas adjacent to the park, to identify factors that might have harmful effects on the park. Park managers will work with state and borough planning teams and private individuals to recommend actions that would avoid or mitigate impacts on park resources.

Mining. Metallic, coal, and limestone deposits and potential oil and gas reserves lie outside the park and preserve. The Usibelli Mine, operated by the Usibelli Coal Company, is the only active coal mine in the vicinity of the park. It currently is the site of extensive surface mining activity (Plangraphics 1983). The coal is transported by railroad to Fairbanks and Seward. According to the Alaska Division of Mining, a three-to four-fold increase in coal mining over the next 10 to 15 years will likely result from sales to Pacific Rim countries. Park managers foresee no significant impacts.

Numerous gold mining claims exist in the Yentna mining district (see the Regional Influences map).[10] The rising price of gold in the late 1970s resulted in extensive new claim staking, primarily along Cache Creek, upper Peters Creek, and the Kahiltna River, and at Mount Fairview. Placer mining in this area is not expected to increase substantially over the next 20 years, but access will be improved (ADNR 1984b). The Matanuska-Susitna Borough is requesting priority consideration for construction of an all-weather road across the mining district to the Fairview mountain group in addition to reconstruction of the Petersville Road. Improved access would serve mining, private land development, recreation, sport hunting, and fishing, and it would potentially offer alternative access to the national park for backcountry use. The Petersville Road vicinity supports the most intense hunting activity in the area, and increased access by sport hunters might necessitate additional monitoring during the hunting season to ensure that no sport hunting occurred within the national park boundary.

Mining claims in the Chulitna mining district are concentrated primarily in the Dunkle Hills area (inside the park boundary) and from the Golden Zone Mine on adjoining lands southwesterly for several miles to the Eldridge Glacier. The Golden Zone Mine has been productive in the past and currently is being reactivated to the extent of improving access along the four-wheel-drive road that connects the area with the George Parks Highway at Colorado Station. The road is not open for public use at present, but it potentially could offer access for recreationists in the future. Other claim groups in this area are being actively explored.

Oil and Gas Development. As part of the state's five-year oil and gas leasing program, the state proposed the lease sale of 960,000 acres in the Minchumina Basin adjacent to the park and preserve. A notice of delay has been issued for sale number 42 because of a lack of industry interest. The sale, originally scheduled for January 1984, may still be held in the future, although petroleum potential is considered low (ADNR 1984). No federal inland oil and gas lease sales are proposed for the area adjacent to the park and preserve.

If oil and gas development does occur, the following associated impacts could result: disruption of traditional subsistence use in and near Denali, disruption of natural fire processes and consequent damage to natural wildlife populations, increased costs for managing the Tanana-Minchumina interagency fire management plan, and new pressures to build roads, which would alter the lifestyle of present residents and change the character of the area.

The Yukon Pacific Corporation is currently evaluating the potential for constructing a gas

[10] This map is not included in this consolidated GMP; please refer to the 1986 General Management Plan for Denali. Information on the map may be out of date.

pipeline from Fairbanks to Anchorage. The pipeline would be added to the Nenana River transportation and utility corridor, which parallels the park's eastern boundary. The company would be required to apply for a right-of-way permit from the Bureau of Land Management and to complete an environmental impact statement before approval could be granted to build along federal portions of the pipeline corridor (BLM 1984a). Details and impacts of this proposal are not yet available, but they would be analyzed thoroughly in the environmental impact statement.

Federal and State Land Disposal Programs. The Bureau of Land Management opened approximately 10,000 acres of land adjacent to the park boundary in the Minchumina block to settlement under the Trade and Manufacturing Site, Homesite, and Headquarters Site Laws. The opening was to provide settlement opportunities for the general public commencing in December 1981. Since then many notices of location have been submitted for the block closest to the park boundary, but only one location has been field-examined and approved (BLM 1984b). The central Yukon resource management plan, due to be completed in July 1985, will address this and other BLM land issues in the vicinity of the park.

As part of its land disposal program, the state of Alaska is subdividing parcels for land settlement. The "Susitna Area Plan" and the "Tanana Basin Plan," both in preparation by the Alaska Department of Natural Resources in cooperation with other agencies, will make recommendations for classifying state lands and develop policies and guidelines for these lands. At this point in the planning process, recommendations are being made to slow the pace of land sales. For example, in the Susitna area the current pace of disposing of 20,000 to 30,000 acres per year will be slowed to approximately 7,000 acres per year (ADNR 1984b).

Generally the state lands adjacent to the park have been classified for the primary uses of recreation, habitat protection, and water resource protection, all of which are compatible with park purposes. Possible secondary uses of these lands include oil and gas development, which could potentially interfere with traditional subsistence uses or degrade natural values within the park. The state plans to dispose of several parcels within 6 miles of the park and preserve boundary; these lands are primarily along the George Parks Highway.

Additionally, the National Park Service remains concerned over the potential for strip development along the George Parks Highway, particularly in the vicinity of the Riley Creek entrance, and it supports the implementation of the recommendations in *Scenic Resources along the Parks Highway* as a means of avoiding this sort of visually intrusive development. The study recognizes the outstanding visual quality of the Riley Creek area and recommends that it remain free of development. Residential and commercial development will more appropriately remain concentrated in the McKinley Village area.

Alaska State Park System. The 1982 Southcentral Region Plan outlines recommendations for Denali State Park over the next 10 years. These include boundary adjustments, updating the management plan, completing the trail program and management plan development phases, staffing for visitor information services at Byers Lake, and reconsidering joint management agreements with the National Park Service. All of these recommendations are compatible with the land protection goals of the National Park Service.

The development of a major visitor activity center on state park lands, as proposed in the NPS plan for Denali National Park and Preserve, will constitute a major change in the management

of Denali State Park. Future cooperative planning regarding this proposal is called for in a memorandum of understanding between the National Park Service and the Alaska Departments of Natural Resources and of Transportation and Public Facilities (see appendix F). [11] Cooperation among all concerned agencies will help ensure that future development and use are fully compatible with the objectives for both the state and the national parks.

Recently Denali State Park was opened to hunting. The National Park Service will continue to work with the state to minimize the effects that hunting might have on increased recreational use as envisioned in the general management plan for Denali National Park and Preserve.

Transportation. A demand for access has accompanied the parceling of state land. Most subdivided parcels are either accessible by air or are close to existing roads. Future roads will be provided by the borough or by the Alaska Department of Transportation. Currently there are no plans for the borough to provide roads in the vicinity of the park other than in the Petersville area, as described in the mining section.

The potential for state road development is described in the draft "Interior Alaska Transportation Study" (ADOT 1983). One of the potential roads identified in the study would go from Healy to McGrath, with a possible spur road south into Kantishna along the Kantishna drainage. Another possible road corridor would follow the Stampede Trail beyond its current terminus to the Kantishna mining area. This latter road would be 75 miles long, cost approximately $100 million to $150 million to build, and provide access primarily for miners. At present, the Stampede Trail is passable by most vehicles for the first several miles, negotiable by four-wheel-drive vehicles for several additional miles, then deteriorates into a tractor trail. There are no current plans to upgrade the trail. Further consideration of any roads into Kantishna should await Congress's decision regarding the status of the Kantishna Hills and would be subject to more detailed study and environmental compliance.

The state of Alaska has negotiated the transfer of the Alaska Railroad from the federal government to the state. As part of the transfer the secretary of transportation has conveyed to the Alaska Railroad Corporation, a public corporation of the state, an exclusive-use easement of not less than 200 feet along the railroad to be used for ''railroad purposes' and also for "such other transportation, transmission, or communication purposes for which lands subject to such easement were utilized as of the date of enactment of this Act" (January 14, 1983, 45 USC 1203).

Utility Development. The Alaska Power Authority has submitted an 18-volume license application to the Federal Energy Regulatory Commission for the development of a major hydroelectric project on the Susitna River, southeast of the park and preserve. Briefly, the project entails constructing two dams, reservoirs, a permanent townsite, temporary camps, an access road from the Denali Highway, a railroad link from Gold Creek, and transmission lines to deliver power to the railbelt. Depending on the granting of the license, the preparation of an environmental impact statement, public hearings, and financing, the project is scheduled for construction beginning in 1987 and reaching a peak in 1990. A work force of 3,500 could be operating in the area by 1990, quadrupling the population of Cantwell and doubling the populations of small communities like Trapper Creek. Visitation to the national park and preserve might increase with the surge in nearby populations, even though recreational facilities would be provided within the dam construction area. Traffic along the George Parks Highway would increase and stimulate additional commercial development. Competition for fish, wildlife, and

[11] This agreement has been replaced by more current agreements. They are not included in this document. Information on the map may be out of date.

other resources would increase, and the rapid growth of Cantwell might affect the movements of the Denali, Nelchina, and Yanert caribou herds., Transmission lines would connect with the intertie utility lines currently under construction, and the number of lines from Willow to Healy, which are visible from the park, would double.

The Alaska Power Authority has constructed an intertie transmission line between Willow and Healy that involves erecting 100-foot towers at 1,300-foot intervals along the route shown on the Regional Influences map. The lines and towers, which pass through the Yanert Valley, are partially visible from the national park entrance. This corridor will be the defined route for other future utility transmission from Anchorage to Fairbanks, and the National Park Service will continue to work with the Alaska Power Authority to mitigate the visual impacts of any future development along the Parks Highway and the park boundary.

Adjacent Native Lands. Doyon does not currently intend to develop the Telida tract of native land west of the preserve, and the corporation will promote subsistence use of the area. Further west on the Nikolai tract, studies have indicated, there is potential for developing coal for liquefaction. The future development of the coal deposits might influence transportation systems in the region. Ahtna is developing a placer mining operation on Valdez Creek east of the park boundary, but otherwise it is not pursuing major developments in the vicinity of the park and preserve.

Cook Inlet Region does not intend to select lands in the vicinity of the park, at least not until native village selections have been made. At present, small native villages in this area are applying for group status to enable them to select lands. Potential uses of these lands if they were eventually selected would likely be limited to subsistence, but they could include mineral and commercial development.

SOCIOCULTURAL CHARACTERISTICS

Denali National Park is primarily a natural area, and the sociocultural resources are directly linked to the natural features. Native and nonnative subsistence users in the areas added by ANILCA continue time-honored traditional hunting and trapping lifestyles. In many cases these people have trapping cabins or have applied for lands used in their ancestral hunting areas. These lands are for the most part in the northern additions near Lake Minchumina. Also included are three cemetery sites near these traditional lands.

PROTECTION ALTERNATIVES

The following alternatives would offer some degree of protection to the park's nonfederal lands. Each alternative is analyzed with respect to its application, sociocultural impacts, and potential effectiveness in land protection. The alternatives considered include regulations, cooperative agreements, the Alaska Land Bank, coordination with other agencies, zoning, less-than-fee acquisitions (easements), and fee simple acquisition. Any of these alternatives could be used singly or in combination.

REGULATIONS

The following federal and state laws and authorities provide some protection for park resources.

Mining operations within the park are addressed by the Mining in the Parks Act of 1976 (16 USC 21-54) and its implementing regulations (36 CFR 9A). The regulations intend to minimize resource impacts by requiring operations to adhere to an approved plan of operations. Operations are monitored by NPS staff for compliance.

All private resource development activities on private, state, and federal lands must meet applicable state and federal environmental protection standards. These standards are cooperatively enforced by the Alaska Departments of Environmental Conservation and Natural Resources, the Environmental Protection Agency, and the National Park Service. Air quality must meet the standards for a class I area as established in the Clean Air Act amendments (42 USC 7401 et seq.) In Alaska the state's water quality standards are more restrictive than the EPA standards, and they are enforced by the Alaska Department of Environmental Conservation.

Section 1104 of ANILCA specifies the procedure for reviewing requests for rights-of-way for any transportation or utility system across public lands, and it establishes the criteria for approving or disapproving such requests. The access provision of section 1110 of ANILCA assures private landowners that they will be given "'such rights as may be necessary to assure adequate and feasible access for economic and other purposes to the concerned lands," subject to reasonable regulations to protect park values.

Under the Alaska Anadromous Fish Act (Stat. 16.05.870), the commissioner of the Alaska Department of Fish and Game provides protection to specific rivers, lakes, and streams or parts of them that are important for the spawning, rearing or migration of anadromous fish. Bearpaw River and its tributaries are on the list of specific rivers that are protected by this act. The act requires that any person or governmental agency desiring to construct a hydraulic project, to use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream, or to use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream must notify the commissioner of this intention before beginning the construction or use.

Application. Regulations cannot usually provide for public use, but they can prevent harm to natural or cultural resources. For example, federal, state, and local regulations often impose strict limits on dredging or filling of wetlands that would destroy wildlife habitat or degrade water quality. It is much more difficult for regulations to absolutely prohibit an activity than to simply limit the type, amount, or intensity of the activity.

Sociocultural Impacts. Regulations may prevent individual landowners from using their land in some manner, but this restriction on individual freedom is imposed for the benefit of the community as a whole. The impact can be regarded as beneficial to the public at large.

Effectiveness. In parks where the impact of development is already evident, regulations are more likely to be effective in reducing adverse effects of major projects. In relatively pristine areas, regulations may be of little use in efforts to preserve natural systems from any intrusions of development. Regulations also are more likely to be effective where there is a good base of information about the impacts of certain activities on park resources.

COOPERATIVE AGREEMENTS

Application. Agreements are written descriptions of how two or more parties will take certain

actions. Agreements can provide for the exchange or transfer of services, funds, or benefits. Some of the elements that could be addressed in an agreement for land protection include

> access for resource management activities, interpretive services, routine maintenance or restoration of structures, law enforcement, joint review of permit applications, enforcement of environmental protection laws

Advantages of agreements include their flexibility, relative low cost, and ability to establish cooperative management arrangements. Disadvantages include the ability of one party to terminate on short notice and lack of permanent protection.

Sociocultural Impacts. Specific impacts are defined by the terms of the agreement. Since agreements allow current uses to continue and all parties have to agree to the terms, negative or adverse impacts are unlikely.

Effectiveness. Agreements are likely to be most effective for land owned by entities other than individuals. These include state or local governments, private nonprofit organizations, federal agencies, and corporations. Agreements are more likely to be workable with these groups than with individuals because organizations often have the necessary resources (staff, equipment, money) to make an agreement worth considering in the first place and to carry out the terms of the agreement over a long period of time.

Cooperative agreements are appropriate when both parties have similar or compatible management objectives. They can be used as interim protective measures when long-term goals cannot be immediately achieved. The expenditure of federal funds to provide permanent facilities is not generally allowed under short-term cooperative agreements.

ALASKA LAND BANK

ANILCA (section 907) established an Alaska Land Bank program to provide legal and economic benefits to native landowners and to provide for the maintenance of land in its natural condition, particularly where these nonfederal lands relate to conservation system units. Land bank agreements may contain provisions such as the landowner's responsibility to manage land in a manner compatible with the planned management of the park. The superintendent's responsibility is also defined. It may include technical and other assistance such as fire management, trespass control, resource and land use planning, and other services, with or without reimbursement as agreed upon by the parties involved. Native corporation lands (but not native allotments or small patented tracts) are immune from adverse possession, real property taxes, and assessments when included in the land bank. They are also immune from judgment in any action of law or equity to recover sums owed or penalties incurred by any native corporation or group or any officer, director, or stockholder of the corporation or group. Land bank agreements are particularly important in cooperating with native corporations that own large tracts of land in and adjacent to the preserve. Sociocultural impacts and effectiveness are essentially the same as cooperative agreements.

COORDINATION WITH OTHER AGENCIES

Actions by federal and local agencies to permit, license, or provide financial assistance for a project might have significant impacts on park resources. Under provisions of the National En-

vironmental Policy Act, major federal actions are subject to public review processes to ensure adequate consideration of possible impacts on the environment. As a concerned land manager and neighbor, the park superintendent can ensure that other agencies are fully aware of any impacts proposed actions might have on park resources. Participation in public hearings and review processes is one means of expressing park concerns. Coordination also might be improved by memoranda of understanding or advance requests to agencies that the park be notified when certain actions are being considered. Participation by the park staff in project or permit review processes encourages compatible designs, locations, and operating requirements for new construction.

The Matanuska-Susitna Borough encompasses lands in the southern portion of the park and preserve. No zoning regulations have been applied, but they may be in the future, based on the area's proximity to Anchorage and Fairbanks and its potential for residential and commercial growth.

EASEMENTS

Landownership may be envisioned as a package of rights. Easements convey only some of those rights from one owner to another, while the other rights of ownership remain unchanged. Easements can be positive (such as conveying a right of access) or negative (such as limiting specific uses of the land).

Application. Easements are most likely to be useful under the following conditions:

- Some, but not all, existing or potential private uses are compatible with park purposes.
- Current owners desire to continue current types of use and occupancy of the l and under conditions conveyed to the National Park Service.
- Protection of scenic values or provision of access for the public or the Park Service is needed only over a portion of the land.

Specific easement terms can be constructed to fit the topography, vegetation, visibility, and character of existing or potential developments on each tract. Easement provisions to protect park resources may address the following points: clearing of vegetation; location and design of new access roads and utilities; density, height, design, and color in developments visible to the public; and access for management of natural and cultural resources.

Sociocultural Impacts. Individual and collective impacts will vary depending on the rights acquired. In most cases an easement continues the current conditions while compensating the owner for the loss of potential uses.

The development of specific easement terms for large tracts requires some detailed site planning to identify the most environmentally sensitive areas and those where development could be accommodated with minimal impacts. The development of specific easement terms can be a cooperative effort to ensure that development follows traditional land use patterns or avoids any unnecessary disturbance of the natural system.

Effectiveness. Because easements are enforceable interests in property, they provide greater assurance of permanent protection than do agreements or zoning ordinances. Easements "run with the land" and are binding on future owners. Advantages of easements include

- o continued private ownership and use subject to the terms of the easement
- o lower initial acquisition costs than fee, and potential to protect more land
- o reduced costs for NPS operations and maintenance

Disadvantages of easements as compared to fee include

- o potential difficulty in enforcement of easement terms
- o unfamiliarity of landowners with less-than-fee ownership
- o relatively high costs of acquisition an undeveloped properties where no further development is compatible
- o increased costs of monitoring the terms and conditions of easement provisions

FEE ACQUISITION

When all of the interests in land are acquired, it is owned in fee simple.

Application. Fee acquisition may be recommended when other methods of protection have been found to be inadequate, inefficient, or ineffective to meet management needs. Fee acquisition is most often appropriate under the following conditions:

- o The land is needed for development of park facilities or heavy public use.
- o The land must be maintained in a pristine natural condition, which precludes reasonable private use.
- o The owner does not wish to sell less-than-fee interest.
- o The land cannot be protected in accord with park purposes by other methods, or alternatives would not be cost-effective.

Sociocultural Impacts. This alternative has great potential for significant change in the life of an individual or community. Unless use and occupancy are reserved, residential dislocations result from acquisition.

Effectiveness. Fee-simple acquisition is the most effective and secure land protection alternative. Generally, it is also the most expensive form of land protection. Advantages of fee acquisition include

- o permanent and complete NPS control over use of the land
- o provision for public access and access by management
- o ability to develop necessary facilities
- o familiarity to landowners
- o opportunity for continued private use under reservations of use and occupancy

Disadvantages of fee acquisition include

- o initial acquisition costs
- o maintenance and management requirements, especially for developed properties
- o impacts on local community from the relocation of a previous owner or the removal of housing from the local market

METHODS OF ACQUISITION

There are four primary methods of acquisition of fee and less-than-fee interests in lands: donation, purchase, exchange, and relinquishment.

Donation. Landowners may be motivated to donate their lands or interests in land to achieve conservation objectives. The tax benefits of donation also may be an important incentive. Donations of fee are deductible from taxable income. Easement donations also may provide deductions from taxable income, but they are subject to certain IRS requirements to qualify as a charitable contribution. Landowners are encouraged to consult their qualified tax advisors to discuss the specific advantages of donations. NPS representatives may be able to provide some general examples of tax advantages, but they cannot provide tax advice or commitments of what deductions will be allowed by the IRS.

Exchange. Lands or interests in land may be acquired by exchange. The land to be exchanged must be located within Alaska and must be of approximately equal value. Differences in value may be resolved by making cash payments. The National Park Service will consider other federal lands within the authorized boundary as potential exchange lands to consolidate NPS jurisdiction over more manageable units.

Other federal lands in Alaska that become surplus to agency needs would normally go through disposition procedures, including public sale. The National Park Service will work with the Bureau of Land Management and the General Services Administration to determine if any additional federal land may be available for exchange purposes.

Purchase. Acquisition by purchase requires funds to be appropriated by Congress or donated from private sources. Further funding for purchases depends primarily on future appropriations. Potential donations of funds or purchases by individuals or organizations interested in holding land for conservation purposes will be encouraged.

Relinquishment. State and native corporation lands under application may be relinquished, in which case ownership remains with the United States. The relinquishing entity can utilize the acreage being relinquished to acquire other lands outside the unit.

CLASSIFICATION OF STATE LANDS

The Alaska Department of Natural Resources, Division of Land and Water Management, is responsible for managing state lands that are not specially designated. This division classifies the state lands it manages. Types of classifications include "Resource Management," "Public Recreation," and "Wildlife Habitat." Classifications establish primary uses for state lands; however, multiple uses of classified lands can occur as long as these other uses are compatible with the designated primary use.

Application. Portions of the Kobuk River [12] have been declared navigable, and therefore portions of the bed of the river are in state ownership. Future navigability determinations may affirm that portions of the beds of other rivers in the park are state owned. Additionally, state lands abut the northeastern boundary of the park. The National Park Service, or any individual or organization, can request that the Division of Land and Water Management classify or reclassify state lands. Classification of state lands may be useful in cases where the interests of the National Park Service and the state of Alaska are similar.

Sociocultural Impacts. Classification of state lands is established through a public process. Any impacts on the people of the region and state would likely be identified and eliminated or minimized during the process. The uses of the lands subject to classification and the type of classification determine what impacts will result.

[12] This is a misprint in the original 1986 Land Protection Plan. It should be "Tokositna River."

Effectiveness. Classification can provide protection for state lands within and adjacent to the park. Advantages of classification include no acquisition cost and no need to exchange lands. Disadvantages of classification include lack of permanent protection for park purposes.

RECOMMENDATIONS

The recommended land protection approaches for nonfederal land are discussed below. Information about specific tracts – owners, acreages, minimum interest needed for protection, justification, proposed method of acquisition, and priority – is included in appendix L. [13]

The use of patented mining claims for new visitor facilities would conflict with the objective of the general management plan to reduce the traffic in the road corridor (refer to the discussion of visitor use and general development in the "General Management Plan" section of this document [14]). The existing recreational uses of private properties in the Kantishna area are considered compatible; however, additional recreational use and facility development in this portion of the park would generate additional traffic on the park road and increase the problem of avoidance behavior by wildlife. To avoid this potential for adverse effects, the National Park Service will seek to acquire, through purchase, donation, or exchange, the surface estates to the mining properties to preclude large-scale recreational development. This action will allow mining activity to continue according to applicable laws and regulations (see appendix B [15]). For the small private tracts an easement will be acquired to maintain compatible uses at existing levels.

The National Park Service will use existing authorities to minimize the adverse effects of ongoing mining activities. Validity determinations for unpatented claims will be completed as quickly as feasible to determine status. Wherever new mining activity might introduce development into a previously undisturbed area, the National Park Service will acquire the mineral properties in fee title, through donation, exchange, or purchase.

The National Park Service will seek a land exchange with the state of Alaska to place the "wolf townships" inside the northeast park boundary. These lands were recognized by Congress as important habitat for park caribou and wolf populations, and they are also used by park bears and moose. Acquisition of these townships is needed to protect the natural ranges of these populations from incompatible development and sport hunting. Specific concerns for the wolf townships are that the Savage wolf pack populations have dropped drastically in recent years and also that wintering caribou are particularly sensitive to human disturbances (NPS, Singer and Beattie 1984). Adding the wolf townships to the park would complete the habitat and range protection of the Toklat and Savage wolf packs and the wintering caribou herd.

This exchange of approximately 95,000 acres has been identified for possible consideration in the state of Alaska and is a recommendation of the draft "Tanana Basin Plan" (ADNR 1984c). Lands involved are primarily state lands which recently have been excluded from the state land disposal program. A total of 41 small tract entries (206 acres total) have been patented by the state from previous small tract sales, and these will not be included in the exchange or relinquishment. Uses on these lands, which are primarily recreational, will be monitored for any adverse impacts on wildlife within the new park boundary. The lands also include Eight-Mile Lake and portions of the Stampede Trail.

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[13] This information is included below in table L-5.

[14] Reference is to the 1986 GMP. This discussion is in the Transportation and Access section of this consolidated GMP document.

[15] This appendix is found in the 1986 GMP.

The secretary of the interior is authorized to acquire by donation or exchange available state lands contiguous to the park boundary by notifying Congress of this intention. If acquisition of these townships is possible only through an exchange, the National Park Service will consider exchanging certain lands of approximately equal acreage and value. Congressional approval is required to increase or decrease the total amount of land within the boundary by more than 23,000 acres.

The state intends to leave the wolf townships open to mineral entry and coal prospecting and leasing. However, the National Park Service recommends the exclusion of these lands from mineral entry until they are acquired by the federal government. Once the area is within the boundaries of the national park, it will be closed to mineral entry.

The national park and preserve boundary will be adjusted to follow natural geographic and hydrographic features wherever possible. The National Park Service proposes that much of the western boundary of the park follow the Swift Fork River. Placing the boundary along this natural barrier to the spread of fire will greatly enhance the fire protection afforded to state and native lands, consistent with the "Tanana-Minchumina Interagency Fire Management Plan." In addition, the inclusion of these lands within Denali National Park will offer added protection to an area of significant caribou habitat, based on 1984 caribou surveys, which indicated use of an area immediately east of the Swift Fork by as many as 200 to 300 caribou. If made part of the preserve, the area will still be subject to both sport and subsistence hunting.

Other areas of federal parkland identified for possible exchange with the state include fragments of small river valleys, such as the Tokositna, which are only partially inside the southern park boundary. Deletion of these valley segments from the national park will simplify the description of legal hunting areas and provide easily identifiable boundaries for sportsmen and others. The recommended boundary redesignation will also exclude one headquarters site and two trade and manufacturing sites from the national park boundary. Since sport hunting will then be allowed in this area now closed to hunting, landowners could realize economic benefits from guiding or other services.

The National Park Service will not seek to include the Chelatna Lake area within Denali National Park and Preserve. Congress recognized that this area was potentially valuable for recreational use and access to the south side of Denali. However, the current proposal for south-side development and use, which focuses on the Ruth Glacier, can be implemented without federal land management in the Chelatna Lake area.

The National Park Service will work with the state to promote compatible management of lands between developable parcels and park lands to facilitate fire management, avoid interference with traditional subsistence uses, and protect wildlife and cultural resource values. Also, for the
navigable portion of the Tokositna River and any rivers determined navigable in the future, the National Park Service strongly urges the state of Alaska to disallow activities that would compromise the natural, cultural, scenic, and recreational values of Denali National Park and Preserve.

The National Park will continue to work cooperatively with native groups in the management of cemetery and historic sites to preserve their cultural significance regardless of ownership.

IMPLEMENTATION PROCEDURES

Appendix L [16] contains the list of specific land protection recommendations. This listing identifies a minimum interest needed for protection but recognizes that the actual means of protection may change as a result of negotiation. To carry out the purposes of ANILCA, section 1302 authorizes the secretary of the interior to acquire by purchase, donation, exchange, or otherwise any lands within the boundaries of conservation system units. Where acquisition is proposed, exchange is the preferred method whenever possible. Donations, or relinquishments where applicable, are encouraged. Purchase with appropriated or donated funds is another possible method. It should be noted that the appropriation of funds for land acquisition is expected to be very limited for the next few years, Therefore, the purchase of nonfederal interests in the park and preserve is expected to be minimal.

No estimates of the cost of implementing the recommendations of this plan have been prepared at this time. A useful estimate requires appraisals that are costly and have a short shelf life because of variable and changing market conditions. Appraisals for individual tracts will be prepared following agreement in concept with the landowner to acquire a specific interest in real property.

Where it is determined that land or interests in land must be acquired, the National Park Service will negotiate with the owner to reach a compatible settlement for purchase. If the land use activities produce an imminent threat or actual damage to the integrity of park or preserve lands, resources, or values, the Park Service will diligently negotiate for acquisition of sufficient interest to prevent such damage. If a negotiated settlement cannot be reached, the secretary of the interior may exercise the power of eminent domain to preclude or cease activity damaging to park resources. Condemnation proceedings, where allowed by law, will not be initiated until negotiations to achieve satisfactory resolution of the problem through means other than condemnation have been exhausted. Under certain circumstances, condemnation action may be used during the process of acquisition involving willing sellers to overcome defects in title.

Landowners who no longer wish to retain their land for the purposes for which it was acquired and who wish to sell property within the park or preserve are encouraged to contact the superintendent. The National Park Service is interested in the opportunity to review all proposed land offerings or proposals. These proposals will be reviewed for possible purchase by the National Park Service, based on their priority in the land protection plan recommendations and on their potential contribution to the enhancement of scenic values, resource protection, continuation of community subsistence opportunities, enhancement of recreational opportunities, and maintenance of the wilderness or undeveloped character of the area. Extenuating circumstances, including hardship as defined in section 1302(g), will also be considered. The availability of appropriated funds will determine the Park Service's ability to act on proposals from willing sellers.

When an owner of improved property offers to sell to the United States, the owner may retain a right of use and occupancy for noncommercial residential or recreational use. Such rights are by agreement with the National Park Service and may last for a period of up to 25 years or for life. In recognition of the Bureau of Indian Affairs' responsibility to owners of native allotments the National Park Service will notify the bureau before taking actions relating native allotments, such as securing agreements, acquiring easements, acquiring full title to lands, or leasing the property for administrative purposes.

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[16] These recommendations are below in Table L-5.

The plan establishes priorities to identify the relative importance of tracts and to provide a general explanation of what lands are considered most important for park purposes. However, because ANILCA and its legislative history strongly support acquisition of lands from voluntary sellers and by exchange, the land protection program will proceed primarily on an opportunity basis as owners offer to sell or exchange their lands. Therefore, tracts may not be acquired in exact priority order. Priorities will be most important if several different offers are submitted at the same time. Limited funds and lands suitable for exchange will generally mean that only high priority lands among those offered can be acquired. Emergency and hardship cases also may be addressed as they arise, regardless of priority.

Potential additions to the park or preserve by exchange with the state pursuant to section 1302(i) of ANILCA or boundary adjustments or additions pursuant to section 103(b) will be designated either park or preserve, whichever is adjacent to the addition. Potential acquisitions within the park or preserve will similarly be designated the same category as surrounding lands. If such an addition or acquisition is adjacent to both park and preserve lands, the tract will have a split designation following the extension of the park and preserve boundary, adjusted wherever possible to follow hydrographic divides or embrace other topographic or natural features. For additions to the park or preserve beyond the 23,000-acre limit of section 103(b), congressional action will be required and park or preserve designations will be determined by the legislation. Public and congressional notification and review of proposed additions pursuant to sections 1302(i) and 103(b) will be provided as appropriate.

Additions to the park or preserve or acquisitions that are within the congressionally established wilderness boundary will automatically become wilderness upon acquisition, pursuant to section 103(c) of ANILCA.

Lands added or acquired will be managed in the same manner as other unit lands of the same designation.

COMPLIANCE CONSIDERATIONS

Actions of this land protection plan that propose no significant change to existing land or public use are categorically excluded from NEPA considerations, in accordance with Department of the Interior implementing procedures (516 DM 6, appendix 7.4(11), and 516 DM, appendix 2). The proposed actions for small tracts, native allotments, mining claims, administrative sites, and agreements and cooperative planning for submerged or adjacent lands are included in this category.

National Environmental Policy Act requirements for proposals in this plan related to native corporation lands and state lands will be fulfilled at a later date when, and if, conceptual agreements are reached with these landowners. Environmental assessments and/or environmental impact statements will be prepared prior to the implementation of any land exchange, with the exception of land exchanges involving the conveyance of lands to native corporations that fulfill entitlements under the terms of ANCSA, as provided by section 910 of ANILCA.

Consistent with current policies on implementation of section 810 of ANILCA, evaluations will be prepared on any proposals in this land protection plan that require the preparation of environmental assessments and/or environmental impact statements, or any proposals that

result in the removal of lands (or interests in lands) from federal ownership.

Section 103(b) of ANILCA requires that Congress be notified of the intent to make boundary adjustments. The public will also receive reasonable notice of the intent to implement boundary adjustments and will be provided the opportunity to review and comment on such adjustments. The compliance requirements of NEPA and ANILCA will be fulfilled in the case of administrative boundary adjustments.

Specific Land Protection Recommendations

The recommended means of land protection for nonfederal land in Denali National Park are in priority order below. Ownership, location, acreages involved, minimum interest needed for protection, and justification are also given. Priorities may be readjusted if incompatible uses develop, as additional information is obtained, or to address emergencies or hardships. The land protection plan will be reviewed every two years and revised as necessary to reflect new information and changing uses and priorities. Review and revision procedures, including public involvement, are discussed in the introduction to the "Land Protection Plan" section of this document.

"Owner" as it pertains to privately owned real property inside the park or preserve is defined as follows:

The person(s), corporation, or other entity who first received patent or other conveyance from the United States of America or the State of Alaska. When the title to real property is conveyed by the United States of America or the State of Alaska (in the case of state land disposals), no records are required to be maintained by the government covering future transfers of ownership. Those records are maintained in each recording district. Abstracts of such records are available from various title insurance companies throughout the state

Table L-5: Specific Land Protection Recommendations

Strikethrough text indicates information that was provided in the 1986 Land Protection Plan but was inaccurate or is no longer true. Underlined text indicates changes in 2007 including corrections for earlier omissions.

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
1	State of Alaska	Fairbanks T12S R9W, Tl2S R10W, T12S R11W, T13S R7W, T13S R8W, T13S R9W, T13S R10W, T13S R11W	~~91,570~~ 97,570 (improved approximation.)	Fee	Exchange	1
	Justification: These lands have long been identified as belonging to the original Mount McKinley National Park ecosystem. These are essential to preserve habitat for moose, wolves, bear, sheep, and caribou which migrate annually into the area from present park lands. For the past several years the Denali caribou herd has wintered in the Stampede area. Protection of the area would maintain the integrity of the Savage, Sanctuary, and Teklanika watersheds and preclude adverse development.					
2	Geoprize, Ltd. Swainbank (Nimbus 1-10, Nim 4-160)	Tracts AA 028909 and AA 029075 (Fairbanks T19S R10W)	3,420	None (delete from park)	Exchange	1
	Justification: The National Park Service intends to exchange the lands containing these mining claims for other lands, thus excluding these claims from the boundary of the park. These mining claims are null and void.					

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
3	Foster, Hawley, Zink (Golden Flower 1-6)	Tracts AA 023357-62 (Fairbanks T19S R10W)	60	None (delete from park)	Exchange	1
	Justification: The National Park Service intends to exchange the lands containing these mining claims for other lands, thus excluding these claims from the boundary of the park. These mining claims are null and void.					
4	Enserch (Golden Bob 14-16)	Tracts AA 029978-80 (Fairbanks T19S R11W)	60	None (delete from park)	Exchange	1
	Justification: The National Park Service intends to exchange the lands containing these mining claims for other lands, thus excluding these claims from the boundary of the park. These mining claims are null and void.					
5	Foster (Colorado 1-9)	Tract AA 023363-71 (Fairbanks T19S R10W)	180	None (delete from park)	Exchange	1
	Justification: The National Park Service intends to exchange the lands containing these mining claims for other lands, thus excluding these claims from the boundary of the park. These mining claims are null and void.					
6	41 34 patented lode claims, Kantishna		~~804.881~~ 667 (approx. 20 each claim)	Less than fee	Purchase interest in the surface estate of each patented lode claim, reserving to the owner the right to use the surface for the exploration and development of the minerals	2
	Justification: These claims were originally staked for their mineral interest. Acquisition of the surface estate would preclude adverse development not directly connected with the mineral industry. Such development might include subdivision, high-rise buildings, or development causing increased road travel over the park road. Recent research has shown that increased traffic along the park road is detrimental to park wildlife. In addition, the surface of these lands is mostly undisturbed, and attempts to develop would cause considerable scarring, loss of vegetation, and erosion Of the 667 acres identified, only approximately 89 acres remain privately owned in Kantishna.					
7	Kantishna Mines, Anthony	Tract F 001169, 2 lode claims (Whistler, Bright Light)	40.497	Fee	Purchase	3
	Justification: These claims are the only patented lode claims situated on the west side of Moose Creek. They are covered with vegetation. Acquisition could preclude further disturbance to scenic and habitat values on the western side of the Moose Creek valley. NPS purchased from landowner.					
8	Fuksa (Comstock 1-8, Eagles Den 1 and 2, Lucky Tuesday 1 and 2, Eldorado 1-4, and Virginia City 1 and 2)	Tracts FF 059042-49, FF 059032,33, FF 059027,28, FF 058991-94, and FF 058995,96 (Fairbanks T16S R18W)	360	Mineral interest	Purchase	4
	Justification: All unpatented claims will undergo validity determination. Acquisition of the mineral interest of valid claims could prevent further disturbance at these sites for the development of access and help maintain the scenic and habitat values of this less disturbed west side of the Moose Creek drainage. The claims are all null and void or the mineral interest purchased.					
9	Taylor (Last Chance Creek lodes 1-6)	Tracts FF 052416-21	120	Mineral interest	Purchase	4
	Justification: All unpatented claims will undergo validity determination. Acquisition of the mineral interest of valid claims could prevent further disturbance for the development of access and further tailing piles at the sites. Protection of this area will help maintain the scenic and habitat values in the Caribou Creek drainage. These mining claims are null and void.					

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
10	Northwest Exploration (Willow 1-8 and Liberty 22-54)	Tracts FF 59258-65 and FF 59209-41	820	Mineral interest	Purchase	4
	Justification: All claims will undergo validity determinations. Acquisition of the mineral interest of relatively undisturbed valid claims could prevent further damage to scenic values and aquatic and riparian habitat, maintain fish passage to Upper Moose Creek, and maintain a caribou calving area and habitat for moose, birds, and other wildlife. Moose Creek flows out of the Denali wilderness. It is popular with hikers and backpackers and is readily accessible from the park road. It supports a large grayling population. These mining claims are null and void.					
11	Talkeetna Mines Trust, Jacobsen	Tract AA 05037, Tokachitna unpatented claims 1-8 (Seward T30N R8W)	160	Mineral	Donation	5
	Justification: The area is currently without mining access in the remote south of Denali National Park. Acquisition would preclude impacts from development and access into this otherwise primitive area of the park and would protect the natural setting.. These mining claims are null and void.					
12	State of Alaska	Tract AA 06910	640	Fee	Exchange	6
	Justification: Lands in these tracts are the only remaining inholdings in the southwest preserve. Their acquisition would consolidate management.					
13	Genet	Tract AA 5488 (Seward T30N R6W)	79.96	Less than fee	Purchase	7
	Justification : Present residential use is compatible with park resources and uses of this area. The park would want to acquire an easement on this property if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
14	State of Alaska	Tract ____ (Seward T20N R6W)	not available	Fee	Exchange	8
	Justification: A land exchange would place boundaries along the Tokositna River and simplify identification by park visitors and NPS and state officials. Basic acreage would not change. The boundary would be the west bank of the Tokositna River.					
15	Barron	Tract AA 3990 (Seward T30N R6W)	47	Less than fee	Purchase	9
	Justification: Present residential use is compatible with park resources and uses of this area. The park would want to acquire an easement on this property if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
16	Basil headquarters site	Tract AA 1076 (Seward T30N R6W)	4.98	Less than fee	Purchase	10
	Justification: Present residential use is compatible with park resources and uses of this area. The park would want to acquire an easement on this property if an adverse use was imminent, to prevent further intrusion on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
17	State of Alaska	3,175 ~~3,635~~ (50 acres Tokositna River, 2,855 acres ~~1,895~~ acres Kantishna River and ~~1,230 acres~~ Muddy River, ~~540~~ 270 acres: Bearpaw River)		Cooperative agreement	Cooperative agreement	11
	Justification: Mining could occur in the beds of rivers determined to be navigable, because title to these riverbeds is vested in the state. The National Park Service needs to prevent the degradation of habitat, water quality, and scenic values on all rivers within the park boundary. A cooperative agreement with the state of Alaska could preclude mineral entry and leasing under state law and otherwise prevent the destruction of riparian habitat and scenic values along any rivers determined to be owned by the state.					
18	~~Application, Cantwell Village Corp.~~ AHTNA Native Corporation (12(b))	Tract FF 14844A2 (Fairbanks T17S R8W, sec. 25, 36, and T18S R8W, sec. 1)	~~1,860~~ 1,382	Less than fee	Purchase or exchange	12
	Justification: This area is adjacent to the community of Cantwell and serves as habitat for moose in the Windy Creek drainage, The area is at the base of the hills above the town and is forested. Land sales, growth, and development could impact this area which is now used by local rural residents for subsistence purposes. A scenic easement could allow compatible development and lessen impacts on habitat and other values.					
19	Application, AHTNA Native Corporation	Tract AA 16172 (Fairbanks T18S R9W)	7,860	Fee	Relinquishment	13
	Justification: This area is important to the habitat and scenic values of the adjacent Denali wilderness.					
20	AHTNA Native Corporation (12(c))	Tract AA 810402 (Fairbanks T17S R9W, sec. 35, 36)	375	Fee	Exchange	14
	Justification: This parcel is needed to consolidate ownership and management in the area and to maintain the integrity of the watershed on the Foggy Pass side of the former Mount McKinley National Park. The parcel blocks a small valley on the existing park side and is important for the movement of wildlife.					
21	~~Application~~, Doyon, Ltd. (12(c))	Tract FF 02190156 (Fairbanks T10S, R20W)	6,073 in current park boundary	Fee	Exchange	15
	Justification: This area northeast of the Muddy River flats was set aside by Congress because of its high resource values. It is composed of wetlands and low wooded hills which serve as moose habitat. Local rural residents depend primarily on these moose for subsistence. Acquisition is necessary to preclude any land disposal, subdivision, or adverse development in the area and to maintain the habitat.					
22	~~Application,~~ Doyon, Ltd. (12(c))	Tract FF 2190491 (Fairbanks T10S R21W)	19,108 in current park boundary	Fee	Relinquishment (or exchange, as appropriate)	16
	Justification: This is the northern end of the Muddy River flats. It is important marshland habitat for trumpeter swans and seasonal riparian habitat for moose. Local rural residents depend primarily on these moose for subsistence. Fee is necessary to preclude any land disposal, subdivision, or adverse development in the area.					
23	Application, Doyon, Ltd. (14(h)(8))	Tracts FF 40216-219 (Fairbanks T11S R20W)	22,662 (5,760, 5,697, 5,445, and 5,760)	Fee	Relinquishment (or exchange, as appropriate)	17
	Justification: These applications are at the north end of lake Chilchukabena, an area identified as important habitat for moose and migrating waterfowl. Local rural residents rely on this area for subsistence. This is the largest lake in the park, and its shoreline should be protected for its scenic and other values. Acquisition is needed to preclude any land disposal, subdivision, or adverse development in the area.					
24	Application, Minchumina Natives, Inc.	Tracts AA 11184 (Fair-banks T11S R23W) and FF 22396 (T11S R22W)	~~3,010~~ 3,185	Fee	Purchase or exchange	18
	Justification: The tracts are near Lake Minchumina. This area is important habitat for migrating waterfowl, including trumpeter swans. If these lands are conveyed, acquisition will be necessary to preclude adverse use, subdivision, or land development.					

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
25	Sheldon headquarters site	Tract AA 445 (Fairbanks 22S R17W)	4.90	None	None	None
	Justification: The current historical pattern of use is compatible with park resources. If incompatible uses occurred, the National Park Service would want to acquire the property. Subdivision or high-rise buildings would be considered incompatible uses. This property is currently used commercially as a shelter for climbers and skiers.					
26	Application, Doyon, Ltd.	Tract FF 22715 (Fairbanks T12S R17W)	160	Cooperative agreement	Relinquishment	19
	Justification: The area is a cemetery/historic site important to native Athapascans. Designation as national park lands currently protects these historic sites by federal law. These lands and historic values should remain federally owned and can be managed and protected respecting native concerns.					
27	Application, Doyon, Ltd.	Tract FF 22818 (Fairbanks T12S R21W, sec.6)	629	Cooperative agreement	Relinquishment	20
	Justification: The area is a cemetery/historic site important to native Athapascans. Designation as national park lands currently protects these historic sites by federal law. These lands and historic values should remain federally owned and can be managed and protected respecting native concerns.					
28	Application, Doyon, Ltd.	Tract FF 22843 (Fairbanks T12S R21W, sec.11-13)	26	Cooperative agreement	Relinquishment	21
	Justification: The area is a cemetery/historic site important to native Athapascans. Designation as national park lands currently protects these historic sites by federal law. These lands and historic values should remain federally owned and can be managed and protected respecting native concerns.					
29	University of Alaska (Stampede Mine)	Tract FF 79301 and 79302 (Ridge Claims 3 and 4)	21.552	Mineral interest	Relinquishment of the mineral interest in the claims	22
	Justification: Ridge Claims 3 and 4 are situated on a ridge above the main block of the Stampede Mine claims. They are unpatented and have not been mined. It is preferable that the activity at the Stampede Mine be confined to the already disturbed area, which is more out of sight and a mile away from the highly visible ridge top. T<u>hese mining claims are null and void.</u>					
30	Application, State of Alaska; <u>partial cross-selection by AHTNA, Inc.</u>	Tract F 034740 (Fairbanks T18S R8W)	~~6,141~~ 5,825 incl. 478 by Ahtna	Fee	Relinquishment or exchange	None
	Justification: Acquisition of an approximately 1,000-acre portion of this parcel, from the ridge top down the west drainage of Windy Creek, is necessary to maintain the integrity of the Windy Creek watershed. This area is adjacent to the town of Cantwell. A cooperative agreement for the remainder of the parcel will be sufficient.					
31	~~Travers~~ Cole	Tract F 29984 (Fairbanks T16S R17W, sec.29NW, HW)	0.517	None	None	None
	Justification : Current historical pattern of use is compatible with park resources. If incompatible uses occurred or were proposed, the National Park Service would want to acquire the property. Subdivision, high-rise buildings, improved access, or other obtrusive development or use causing increased travel over the park road would be considered incompatible uses. Recent research has shown that increased travel on the park road is detrimental b park wildlife. Part of this tract was sold; however, a parcel 150' x 150' in the southwest corner was retained by Mr. Travers. A small cabin sits on the property.					

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
32	~~Hunter~~ Wood	Tract F 9215 (Fairbanks T16S R17W, sec. 19NE, 20NW)	12	None	None	None
	Justification: Mining could occur in the beds of rivers determined to be navigable, because title to these riverbeds is vested in the state. The National Park Service needs to prevent the degradation of habitat, water quality, and scenic values on all rivers within the park boundary. A cooperative agreement with the state of Alaska could preclude mineral entry and leasing under state law and otherwise prevent the destruction of riparian habitat and scenic values along any rivers determined to be owned by the state.					
33	Wayson ~~Olsen homestead site~~	Tract F 2627 (Fairbanks T12S R17W, Diamond, AK)	15.39	None	None	None
	Justification: Use as a single residence or part-time residence without further improvements to the land or improved access is compatible. Otherwise, fee interest by purchase would be recommended.					
34	Cole (Camp Denali)	Tract F 9215 (Fairbanks T16S R17W, sec. 19NE and 20 NW)	55.306	Less than fee (easement)	Purchase	23
	Justification: Camp Denali is a private lodge located near the Kantishna Mining district. It operates guided activities in Denali National Park by concession permit. The complex consists of a lodge, dining room, outbuildings, and guest cabins designed to accommodate 32 people on a regular basis. Subdivision, high-rise buildings, improved access, or development causing increased travel over the park road would be considered incompatible uses. Recent research has shown that increased travel on the park road would be detrimental to park wildlife. An easement limiting development and occupancy to present levels would ensure that road use limits would be maintained.					
35	Cole ~~Van Wickle homesite~~	Tract FF 6085 (Fairbanks T16S R17W, sec. 90SE, NE, SE, SE and 10SW, NW, SW, SW)	4.99	Less than fee (easement)	Purchase	24
	Justification: This is a highly visible non-mining property. Subdivision, high-rise buildings, improved access, or other obtrusive development or increased development causing increased travel over the park road would be considered incompatible uses. Recent research has shown that increased travel on the park road would be detrimental to park wildlife. An easement limiting development and occupancy to present levels would ensure that road use limits would be maintained.					
36	Doyon, Ltd. ~~Ashbrook homesite~~ (Kantishna Roadhouse)	Tract F 20831 (Fairbanks T16S R18W, sec. 13)	5.0	Less than fee (easement)	Exchange	25
	Justification : The Kantishna roadhouse is a small hotel, restaurant, and bar which caters to both organized tours and walk-in traffic. It currently consists of a private home, lodge, historic roadhouse, five cabins, and several Weatherport tents. Subdivision, high-rise buildings, improved access or development causing increased travel on the park road would be considered incompatible uses. Recent research has shown that increased travel on the park road would be detrimental to park wildlife. An easement limiting development and occupancy to present levels would ensure that road use limits would be maintained.					
37	Laschelt ~~Hunter~~ headquarters site (Eagle's ~~Nest)~~	Tract F 34584 (Fairbanks T16S R17W, sec.17)	4.99	Less than fee (easement)	Purchase	26
	Justification: This is a highly visible non-mining property. Subdivision, high-rise buildings, improved access, or other obtrusive development or increased development causing increased travel over the park road would be considered incompatible uses. Recent research has shown that increased travel on the park road would be detrimental to park wildlife. An easement limiting development and occupancy to present levels would ensure that road use limits would be maintained.					

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
38	Cole (Hawk's Nest)	Tract F 29984 (Fairbanks T16S R17W, sec. 29NW, NW)	4.483	Less than fee (easement)	Purchase	27
	Justification: This is a highly visible non-mining property. Subdivision, high-rise buildings, improved access, or other obtrusive development or increased development causing increased travel over the park road would be considered incompatible uses. Recent research has shown that increased travel on the park road would be detrimental to park wildlife. An easement limiting development and occupancy to present levels would ensure that road use limits would be maintained.					
39	Cole ~~Crabb~~ (North Face Lodge)	Tract F 12691 (Fairbanks T16S R17W)	4.75	Less than fee (easement)	Purchase	28
	Justification: This is a highly visible small hotel with 15 rooms, accommodating up to 30 guests, located on the park road past Wonder Lake. It has been offered for sale, and such sale, to be profitable, would require extensive development of the property, which would increase its visibility and road use. Subdivision, high-rise buildings, improved access, or development causing increased travel over the park road would be considered incompatible uses. Recent research has shown that increased travel on the park road would be detrimental to park wildlife. An easement limiting development and occupancy to present levels would ensure that road use limits would be maintained.					
40	~~John~~ Starr	Tract F 2624 (Fairbanks T12S R21W, sec. 12W2)	160	None	None	None
	Justification: This is an Alaska native allotment. Present residential use is compatible with park resources. The park would want to acquire this property in fee if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
41	Menke/Burns	Tract FF 1268 (Fairbanks T11S R21W, parcel C, and T11S R22W, parcel B)	80	None	None	None
	Justification: This is an Alaska native allotment. Present residential use is compatible with park resources. The park would want to acquire this property in fee if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
42	~~Application,~~ Don Chase	Tract FF 16597A (Fairbanks T11S R20W)	110	None	None	None
	Justification: This is an Alaska native allotment . Present residential use is compatible with park resources. The park would want to acquire this property in fee if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
43	Nikolai	Tract FF 17523 (Fairbanks T15S R28W, sec.18A, and T16S R27W, sec. 28 and 33B	160	None	None	None
	Justification: This is an Alaska native allotment. Present residential use is compatible with park resources. The park would want to acquire this property in fee if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
44	Nikolai	Tract FF 17524 (Fairbanks T15S R27W, sec.34	80	None	None	None
	This is an Alaska native allotment. Present residential use is compatible with park resources. The park would want to acquire this property in fee if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development. The property sits between Highpower and Deep creeks in the western end of the park.					

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
45	Rudolph Chase	Tract FF 17876 (Fairbanks T11S R20W, sec. 31, and T12S R20W, sec.6)	160	None	None	None
	Justification: This is an Alaska native allotment. Present residential use is compatible with park resources. The park would want to acquire this property in fee if an adverse use was imminent, b prevent further intrusions on lands basically primitive in character and to minimize impacts an wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
46	~~Application~~, Starr	Tracts FF 19491 C (Fairbanks T12S R20W, sec.9), FF 19491 B (T11S R21W, sec.3 and 10), FF 19491 A (T11S R21W, sec.6), and FF 19491 D (T11S R21W, sec.18)	160	None	None	None
	This is an Alaska native allotment. Present residential use is compatible with park resources. The park would want to acquire this property in fee if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
47	Harrison		0.28 0.25	None	None	None
	Present residential use is compatible with park resources and uses of this area. The park would want to acquire this property in fee if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
48	Barb		0.12 0.25	None	None	None
	Justification: Present residential use is compatible with park resources and uses of this area. The park would want to acquire this property in fee if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
49	University of Alaska (Stampede Mine)	Tract FF 079305-7 and FF 59096-7 (Fairbanks T13S R15W)		None	Cooperation	None
	This mineral interest is owned by the University of Alaska, School of Mining. It is administered under an agreement with the National Park Service. The National Park Service intends to continue managing the area under the agreement to provide educational opportunities to students. This mineral interest was purchased by the NPS.					
50	Cordasci (Absolution)	Tract AA 13539 (Fairbanks T20S R11W, sec.5NW)	20	None	Regulation	
	Justification: This claim will be examined for validity. If it is determined valid, it will be managed according to federal and state regulations to ensure land protection of the area. This claim is null and void.					
51	Ohio Creek Mining Corp. (Glacier Queen)	Tract AA 034579 (Fairbanks T20S R12W, sec.18NE)	None		Regulation	
	Justification: This claim will be examined for validity. If it is determined valid, it will be managed according to federal and state regulations to ensure land protection of the area. This claim is null and void.					
52	Wilson (Don 1, 2, 9, and 10)	Tracts AA 032502-3 and AA 032510 (T20S R11W)	60	None	Regulation	
	Justification: These claims will be examined fur validity. If claims are determined valid, any operations will be managed according to federal and state regulations to ensure land protection of the area. This claim is null and void.					

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
52	Wilson (Don 1, 2, 9, and 10)	Tracts AA 032502-3 and AA 032510 (T20S R11W)	60	None	Regulation	
	Justification: These claims will be examined fur validity. If claims are determined valid, any operations will be managed according to federal and state regulations to ensure land protection of the area. These claims are null and void.					
53	Unpatented lode claims, Kantishna Hills		1,320	None	Regulation	
	Justification: All unpatented claims will undergo validity determinations. On any valid lode claims, land protection will be achieved through compliance with plans of operations pursuant to title 36, Code of Federal Regulations, part 9(A), and other applicable state and federal laws. Approximately 40 acres of these unpatented lode claims are being appealed by the NPS regarding a reversal of a negative mineral reports. The other claims in this group are null and void.					
54	Unpatented placer claims, Kantishna Hills		3,500	None	None	None
	Justification: All unpatented placer claims will undergo validity determinations. On any valid lode claims, land protection will be achieved through compliance with plans of operations pursuant to title 36, Code of Federal Regulations, part 9(A), and other applicable state and federal laws. Approximately 118 acres of unpatented placer claims remain as valid claims. The other claims in this group are null and void, except for 180 acres that were patented and remain in private ownership or were purchased by NPS. See Area #58.					
55	Right-of-Way: State of Alaska	Tract: Alaska Railroad right-of-way	835	None	None	None
	Justification: The Alaska Railroad right-of-way is the result of congressional action. Use of the right-of-way is the subject of a memorandum of understanding between the state of Alaska and the National Park Service.					
56	Right-of-Way: State of Alaska	Tract: George Parks Highway	241	None	None	None
	Justification: The current highway is maintained by the state of Alaska and is the major link between Anchorage and northern Alaska.					
57	Application, Starr, Jr.	Fairbanks T11S R21W, sec.3	160	None	None	None
	This is an Alaska native allotment. Present residential use is compatible with park resources. The park would want to acquire this property in fee if an adverse use was imminent, to prevent further intrusions on lands basically primitive in character and to minimize impacts on wildlife habitat and subsistence uses. Adverse uses would include subdivision or commercial development.					
58	Patented placer claims, Kantishna	~~9 claims (application)~~ Parcels are on 6 claims	34 (approx. 20 each claim) ~~178~~	Less than fee	Purchase interest in the surface estate of each patented lode claim, reserving to the owner the right to use the surface for the exploration and development of the minerals	2
	Justification: These claims were originally staked for their mineral interest. Acquisition of the surface estate would preclude adverse development not directly connected with the mineral industry. Such development might include subdivision, high-rise buildings, or development causing increased road travel over the park road. Recent research has shown that increased traffic along the park road is detrimental to park wildlife. In addition, the surface of these lands is mostly undisturbed, and attempts to develop would cause considerable scarring, loss of vegetation, and erosion. Approximately 34 acres of patented placer claims remain privately owned in Kantishna.					

Area	Owner	Description	Size (acres)	Minimum Interest Needed	Recommended Method of Acquisition	Priority
59	State of Alaska Mental Health Lands Trust	Tract: F034740	316	Fee	Relinquishment of Exchange	None
	Justification: Acquisition of this parcel is necessary to maintain the integrity of the large mammal habitat west of Cantwell Creek. This area would likely be developed for Trust revenues.					
60	Right-of-Way: State of Alaska	Tract: 4.5 Mile road from Old Park Boundary to Kantishna Airstrip	109	None	None	None
	Justification: The current Omnibus Act road is maintained by DENA under an MOU between ADOTPF and the NPS and connects the Kantishna area with the former Mt. McKinley National Park.					
61	Right-of-Way: State of Alaska	Tract: Dunkle Road	71	None	None	None
	Justification: This Omnibus Act Road connects the AKRR stop at Colorado with the historic Dunkle mine area and provides access to the Golden Zone Mine.					

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Superintendent's Compendium (annual)

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Executive Order 11644, ''Use of Off Road Vehicles on the Public Lands.''
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516 DM 6, appendix 7.4(11), and 516 DM, appendix 2
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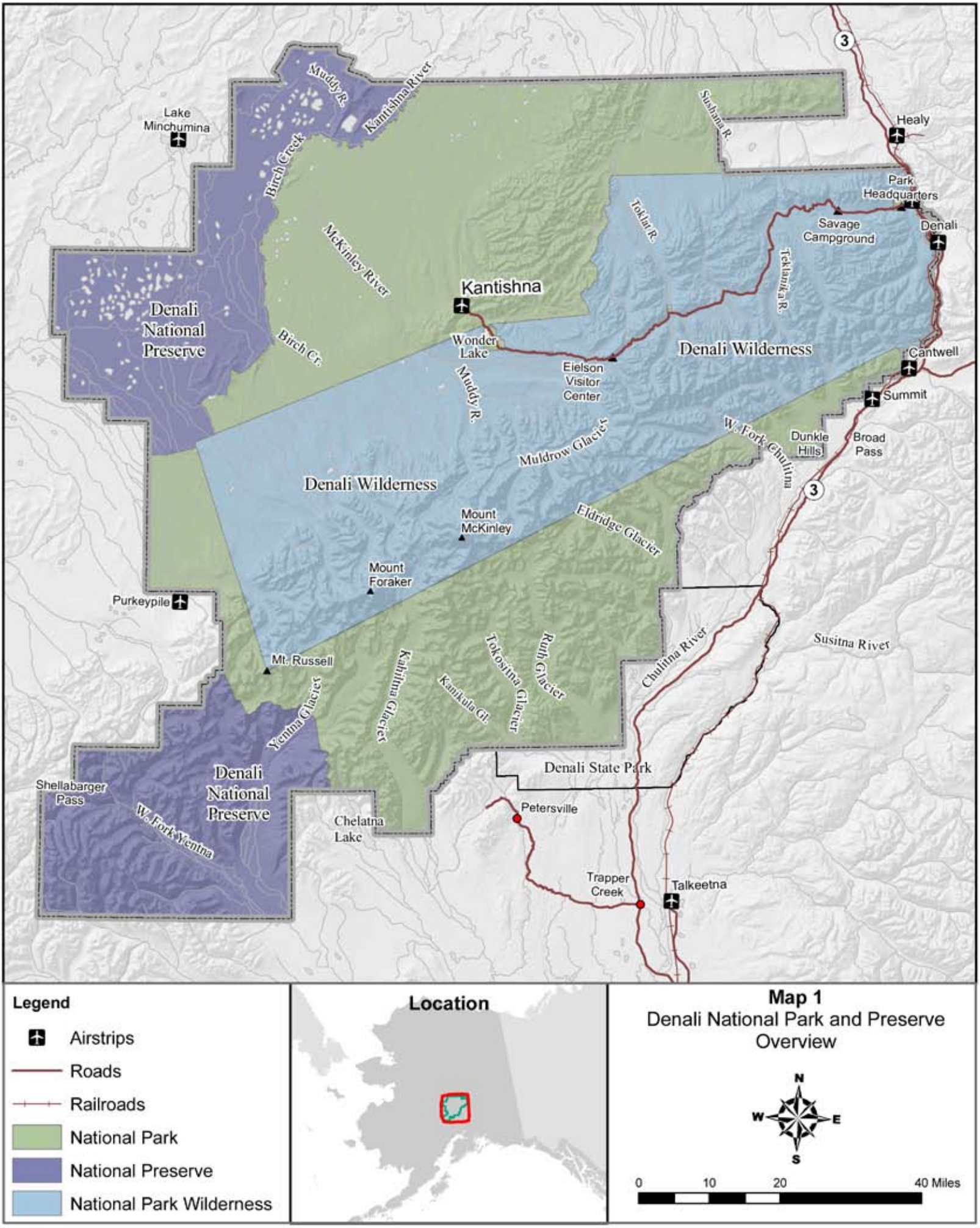
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Kantishna River
Birch Creek
Susitna R.
Healy
Park Headquarters
Savage Campground
Denali
Toklat R.
Teklanika R.
McKinley River
Kantishna
Denali National Preserve
Birch Cr.
Wonder Lake
Eielson Visitor Center
Denali Wilderness
Cantwell
Summit
Muddy R.
Muldrow Glacier
W. Fork Chulitna
Dunkle Hills
Broad Pass
Denali Wilderness
Mount McKinley
Eldridge Glacier
Mount Foraker
Purkeypile
Mt. Russell
Kahiltna Glacier
Tokositna Glacier
Ruth Glacier
Kanikula Gl.
Chulitna River
Susitna River
Yentna Glacier
Denali State Park
Shellabarger Pass
Denali National Preserve
W. Fork Yentna
Petersville
Chelatna Lake
Trapper Creek
Talkeetna
Legend
Airstrips
Roads
Railroads
National Park
National Preserve
National Park Wilderness
Location
Map 1
Denali National Park and Preserve Overview
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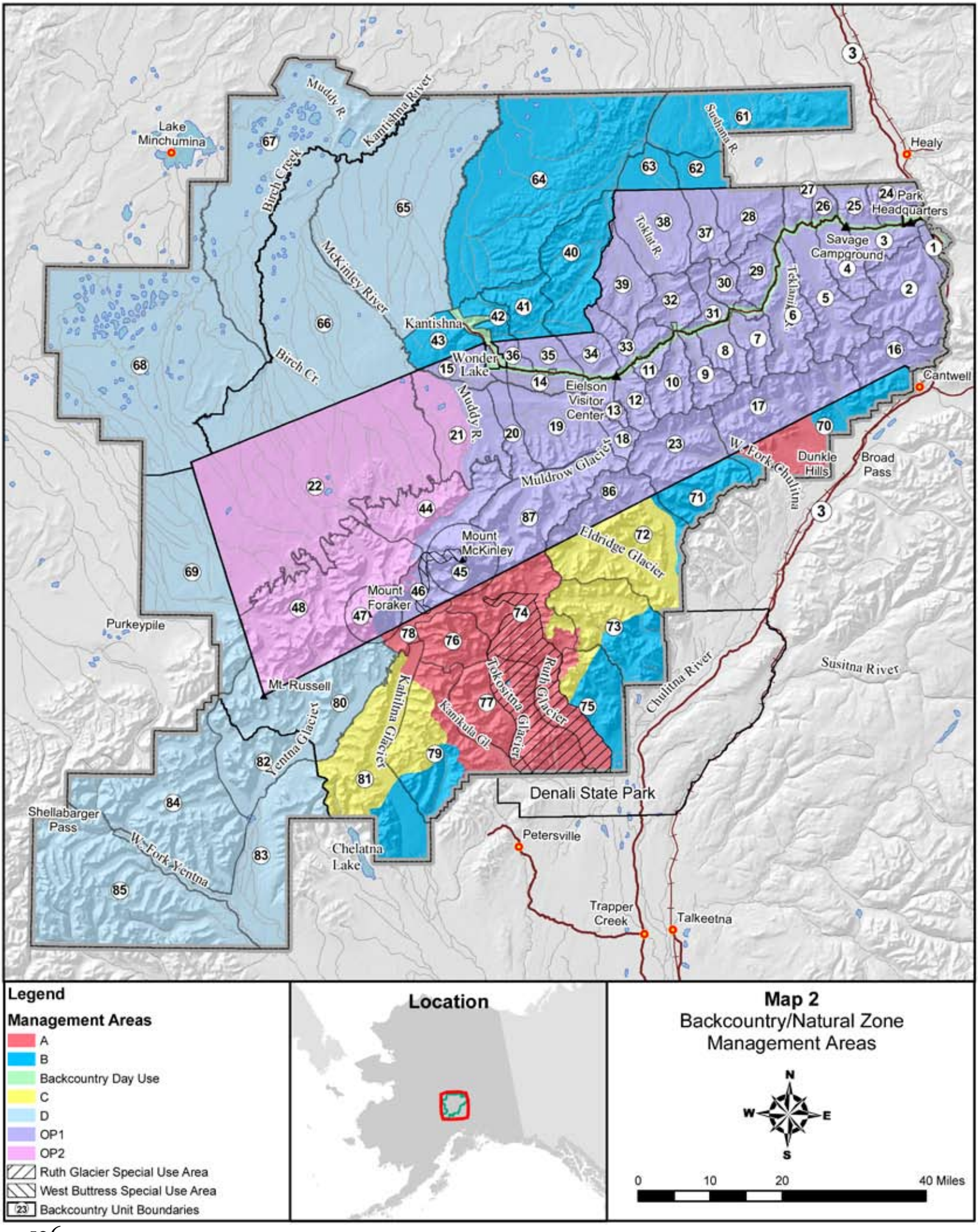
40 Miles


Lake Minchumina
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Muldrow Glacier
Mount McKinley
Mount Foraker
Eldridge Glacier
Purkeypile
Mt. Russell
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Kahiltna Glacier
Kanikula Gl.
Tokositna Glacier
Ruth Glacier
Shellabarger Pass
W. Fork Yentna
Chelatna Lake
Denali State Park
Petersville
Trapper Creek
Talkeetna
Chulitna River
Susitna River
W. Fork Chulitna
Dunkle Hills
Broad Pass
Cantwell
Healy
Savage Campground
Park Headquarters
Toklat R.
Teklanika R.
Susitna R.
Legend
Management Areas
A
B
Backcountry Day Use
C
D
OP1
OP2
Ruth Glacier Special Use Area
West Buttress Special Use Area
Backcountry Unit Boundaries
Location
Map 2
Backcountry/Natural Zone
Management Areas
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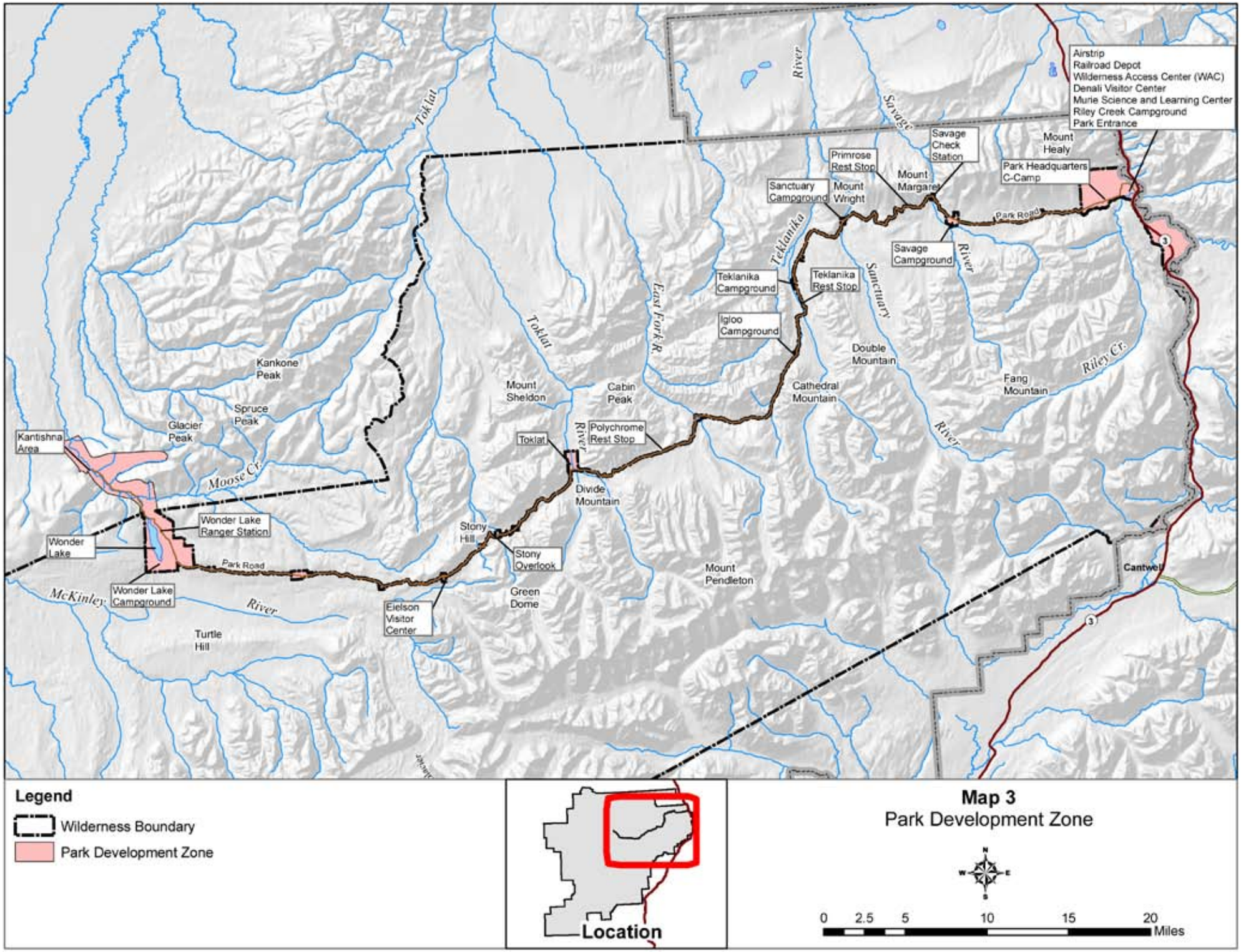
Airstrip
Railroad Depot
Wilderness Access Center (WAC)
Denali Visitor Center
Murie Science and Learning Center
Riley Creek Campground
Park Entrance
Savage River
Savage Check Station
Mount Healy
Primrose Rest Stop
Park Headquarters C-Camp
Sanctuary Campground
Mount Wright
Mount Margaret
Park Road
Teklanika River
Savage Campground
Sanctuary River
Teklanika Campground
Teklanika Rest Stop
Igloo Campground
Toklat River
East Fork R.
Double Mountain
Riley Cr.
Fang Mountain
Cathedral Mountain
Mount Sheldon
Cabin Peak
Polychrome Rest Stop
Toklat
Kankone Peak
Spruce Peak
Glacier Peak
Kantishna Area
Moose Cr.
Wonder Lake Ranger Station
Wonder Lake
Park Road
Wonder Lake Campground
McKinley River
Turtle Hill
Eielson Visitor Center
Stony Hill
Stony Overlook
Green Dome
Divide Mountain
Mount Pendleton
Cantwell
Legend
Wilderness Boundary
Park Development Zone
Location
Map 3
Park Development Zone
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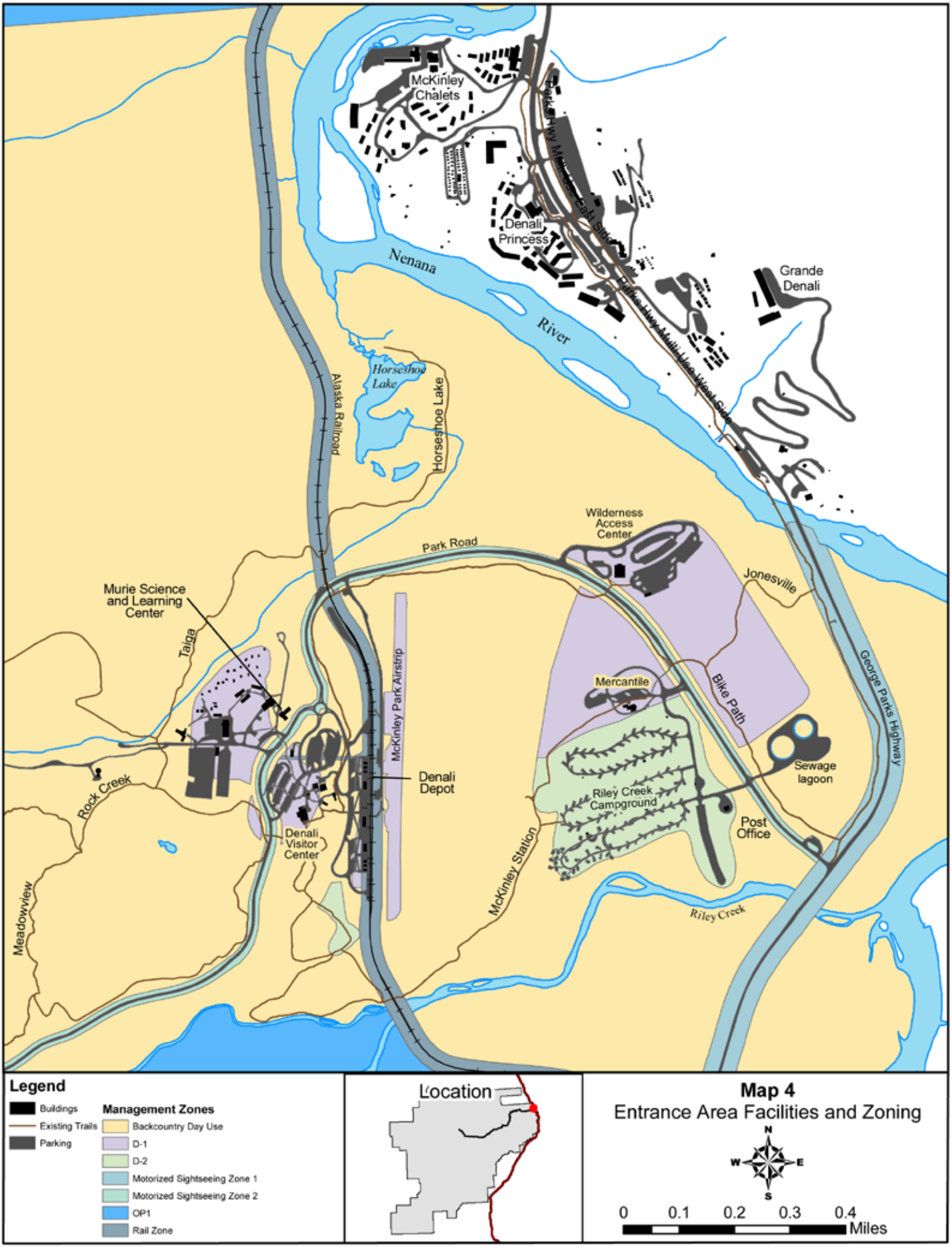
Miles


McKinley Chalets
Denali Princess
Nenana River
Grande Denali
Horseshoe Lake
Alaska Railroad
Wilderness Access Center
Park Road
Jonesville
Murie Science and Learning Center
Taiga
McKinley Park Airstrip
Mercantile
Bike Path
George Parks Highway
Sewage lagoon
Rock Creek
Denali Depot
Riley Creek Campground
Post Office
Denali Visitor Center
McKinley Station
Meadowview
Riley Creek
Legend
Buildings
Existing Trails
Parking
Management Zones
Backcountry Day Use
D-1
D-2
Motorized Sightseeing Zone 1
Motorized Sightseeing Zone 2
OP1
Rail Zone
Location
Map 4
Entrance Area Facilities and Zoning
N
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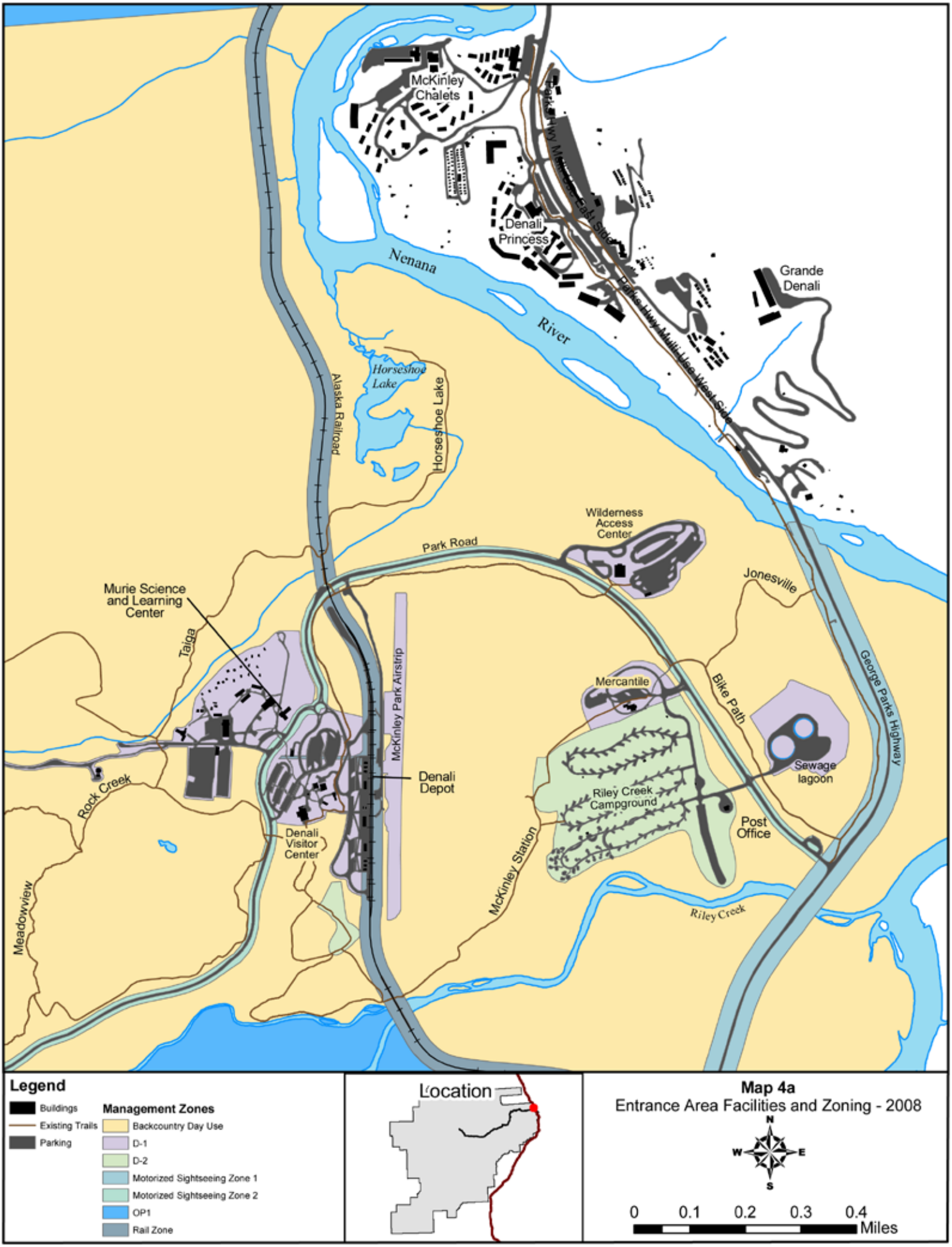
Miles


McKinley Chalets
Denali Princess
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Horseshoe Lake
Alaska Railroad
Wilderness Access Center
Park Road
Jonesville
Murie Science and Learning Center
Taiga
McKinley Park Airstrip
Mercantile
Bike Path
George Parks Highway
Sewage lagoon
Rock Creek
Denali Depot
Riley Creek Campground
Post Office
Denali Visitor Center
McKinley Station
Meadowview
Riley Creek
Legend
Buildings
Existing Trails
Parking
Management Zones
Backcountry Day Use
D-1
D-2
Motorized Sightseeing Zone 1
Motorized Sightseeing Zone 2
OP1
Rail Zone
Location
Map 4a
Entrance Area Facilities and Zoning - 2008
N
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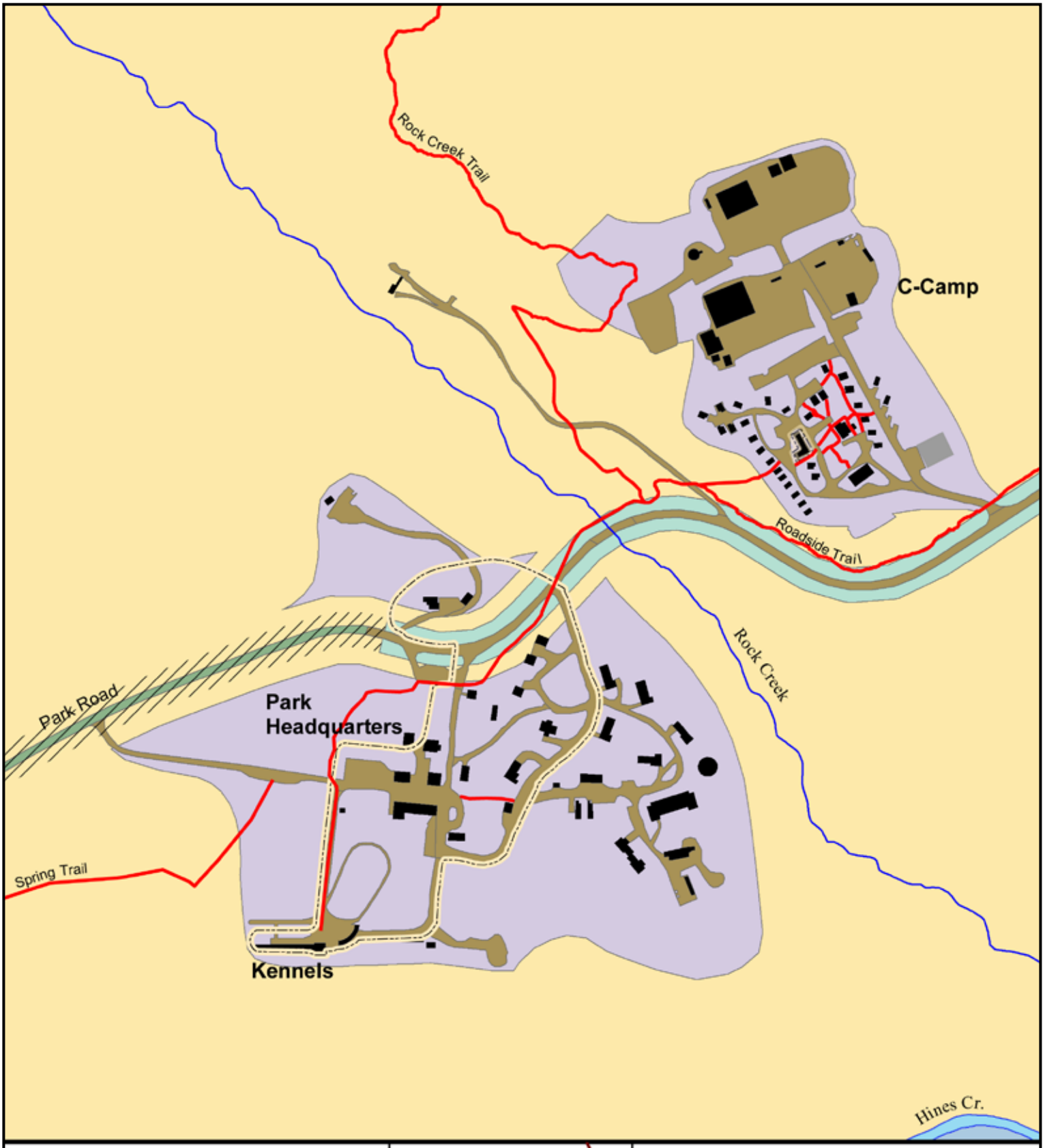
Miles


Rock Creek Trail
C-Camp
Roadside Trail
Rock Creek
Park Road
Park
Headquarters
Spring Trail
Kennels
Hines Cr.
Legend
Existing Trails
Historic District
Existing Building
Roads and Parking
Management Zones
Backcountry Day Use
D-1
Motorized Sightseeing Zone 2
Motorized Sightseeing Zone 3
OP1
Location
Map 5
Headquarters and C-Camp Area
Facilities and Zoning
N
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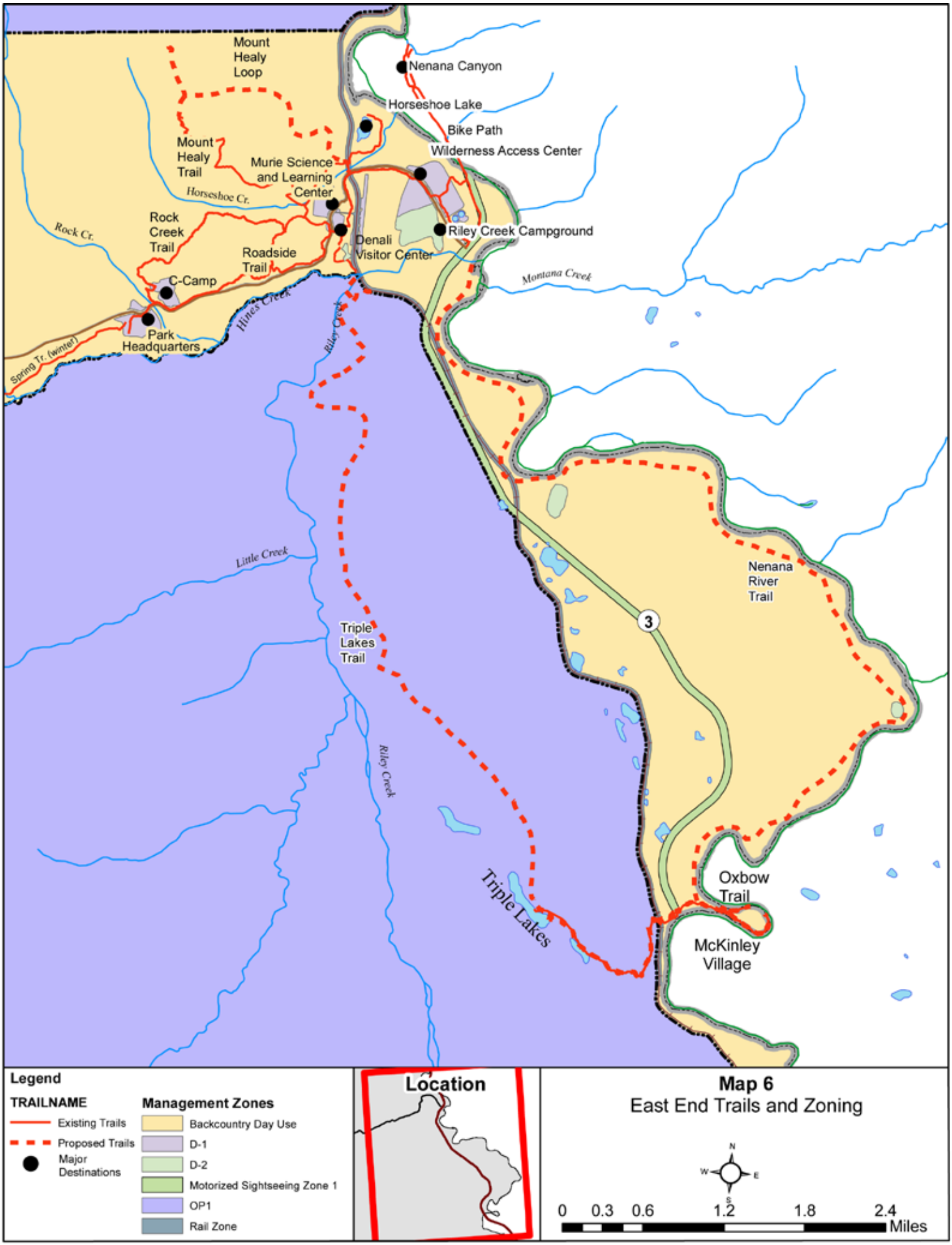
E
S
0 120 240 480 720 960
Feet


Mount Healy Loop
Nenana Canyon
Horseshoe Lake
Bike Path
Wilderness Access Center
Mount Healy Trail
Murie Science and Learning Center
Horseshoe Cr.
Rock Cr.
Rock Creek Trail
Roadside Trail
C-Camp
Park Headquarters
Hines Creek
Spring Tr. (winter)
Denali Visitor Center
Riley Creek Campground
Montana Creek
Riley Creek
Little Creek
Triple Lakes Trail
Triple Lakes
Nenana River Trail
3
Oxbow Trail
McKinley Village
Legend
TRAILNAME
Existing Trails
Proposed Trails
Major Destinations
Management Zones
Backcountry Day Use
D-1
D-2
Motorized Sightseeing Zone 1
OP1
Rail Zone
Location
Map 6
East End Trails and Zoning
N
W
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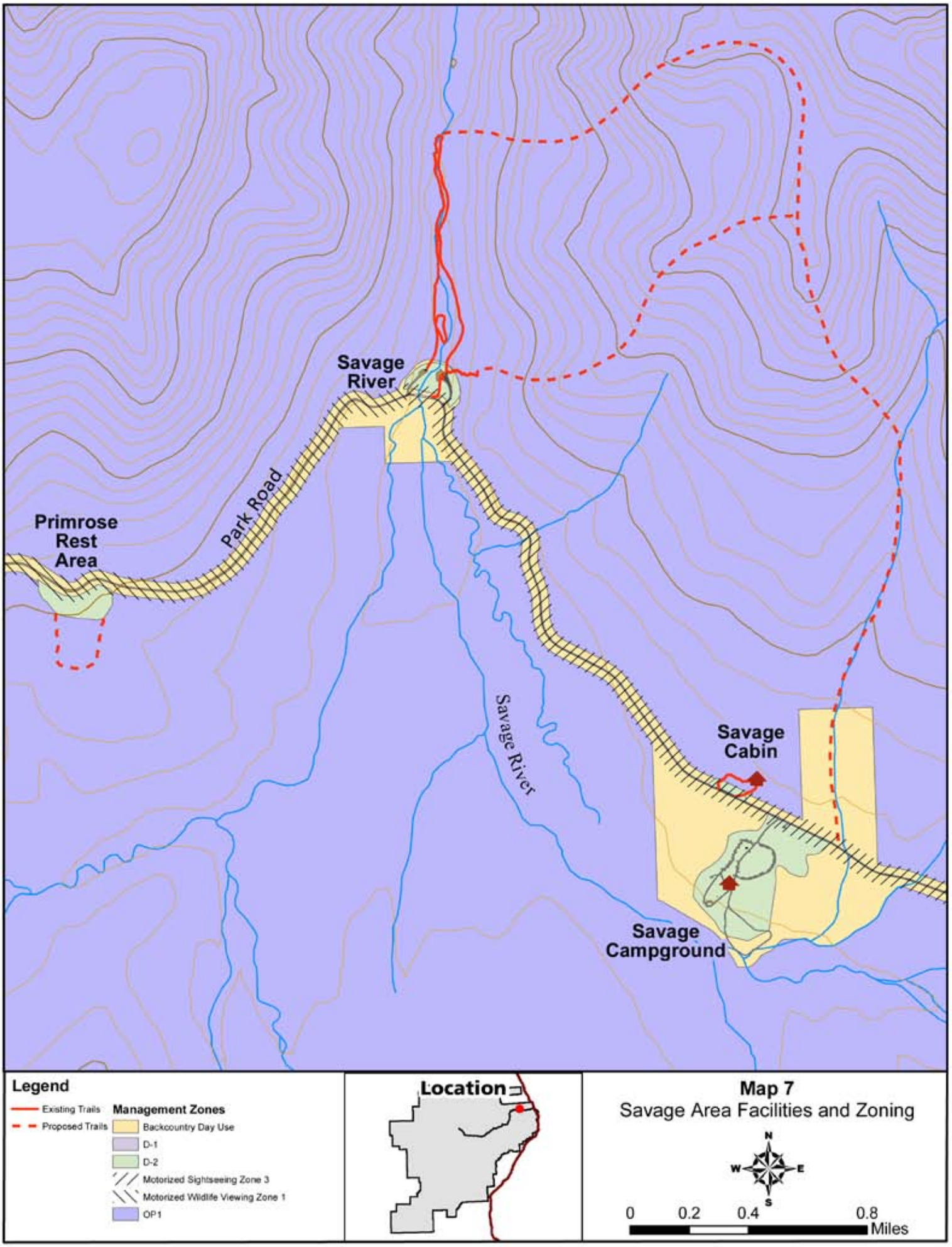
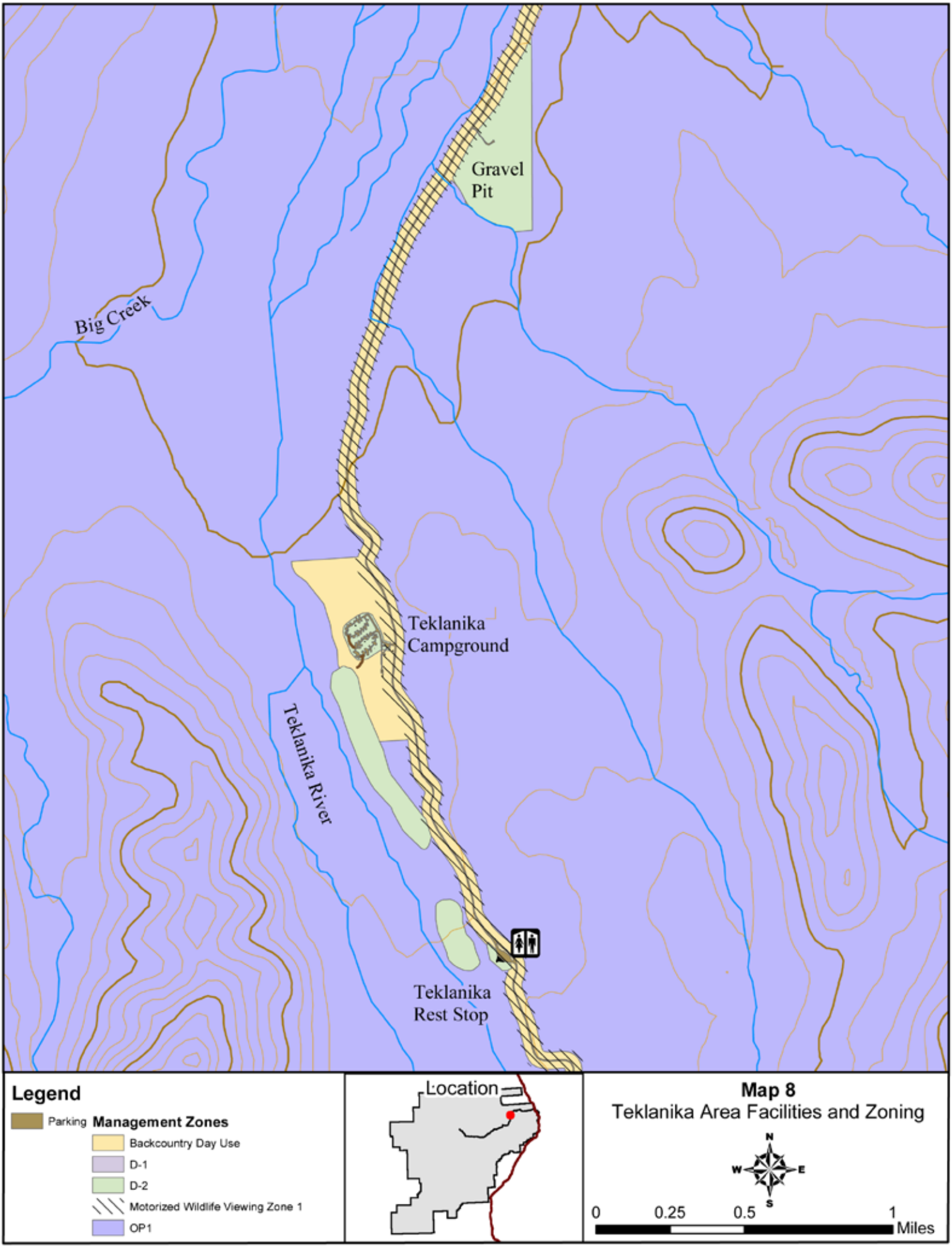
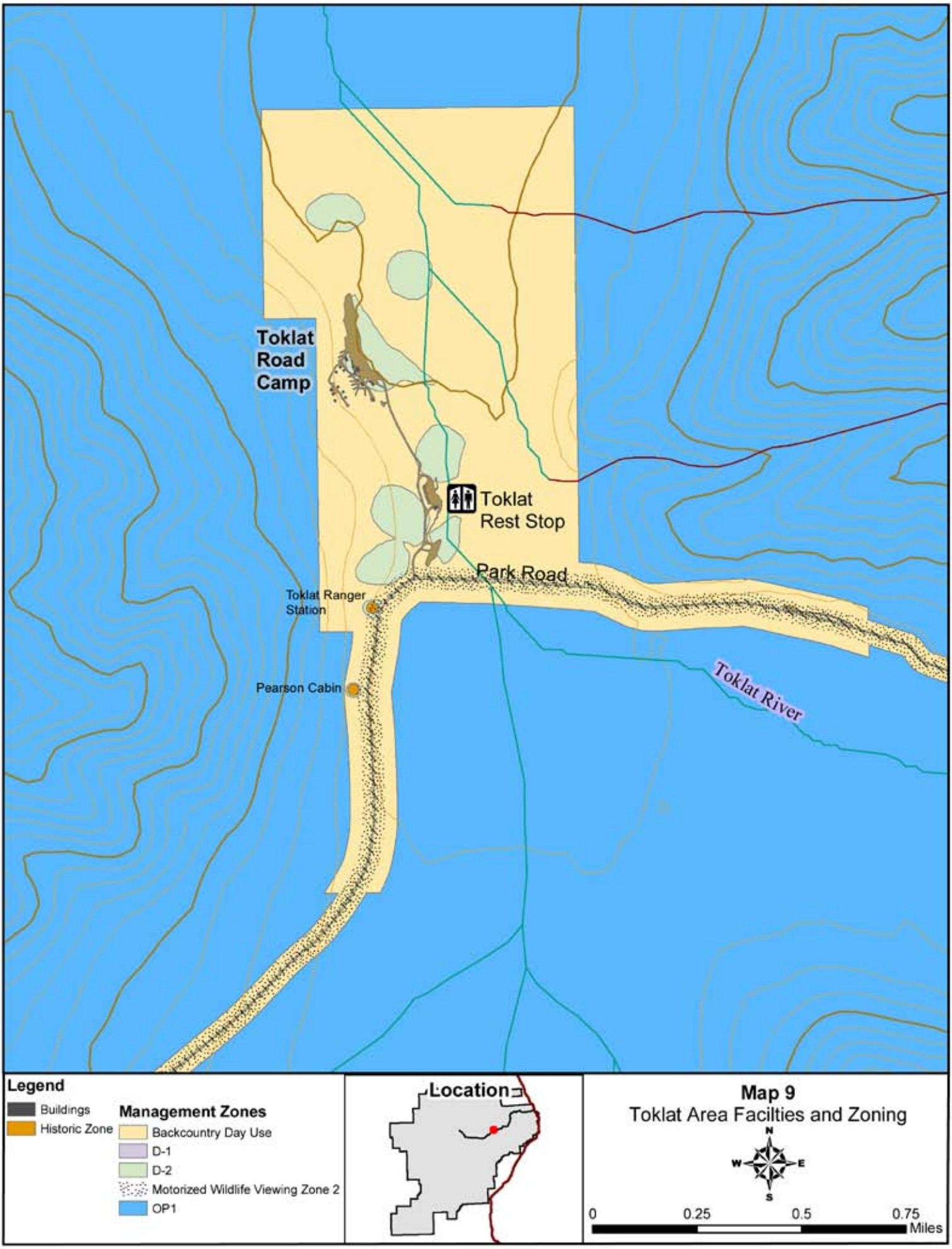
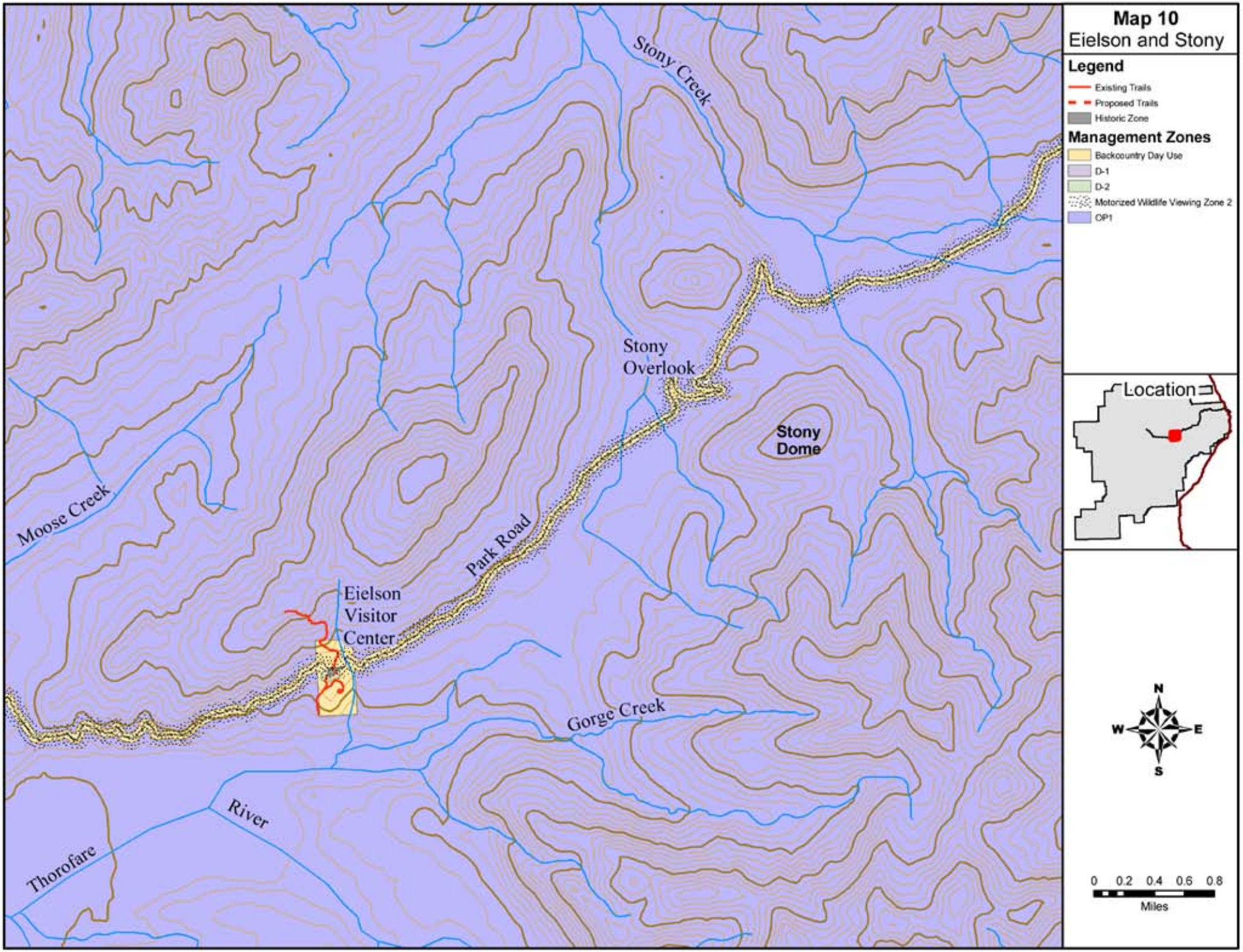
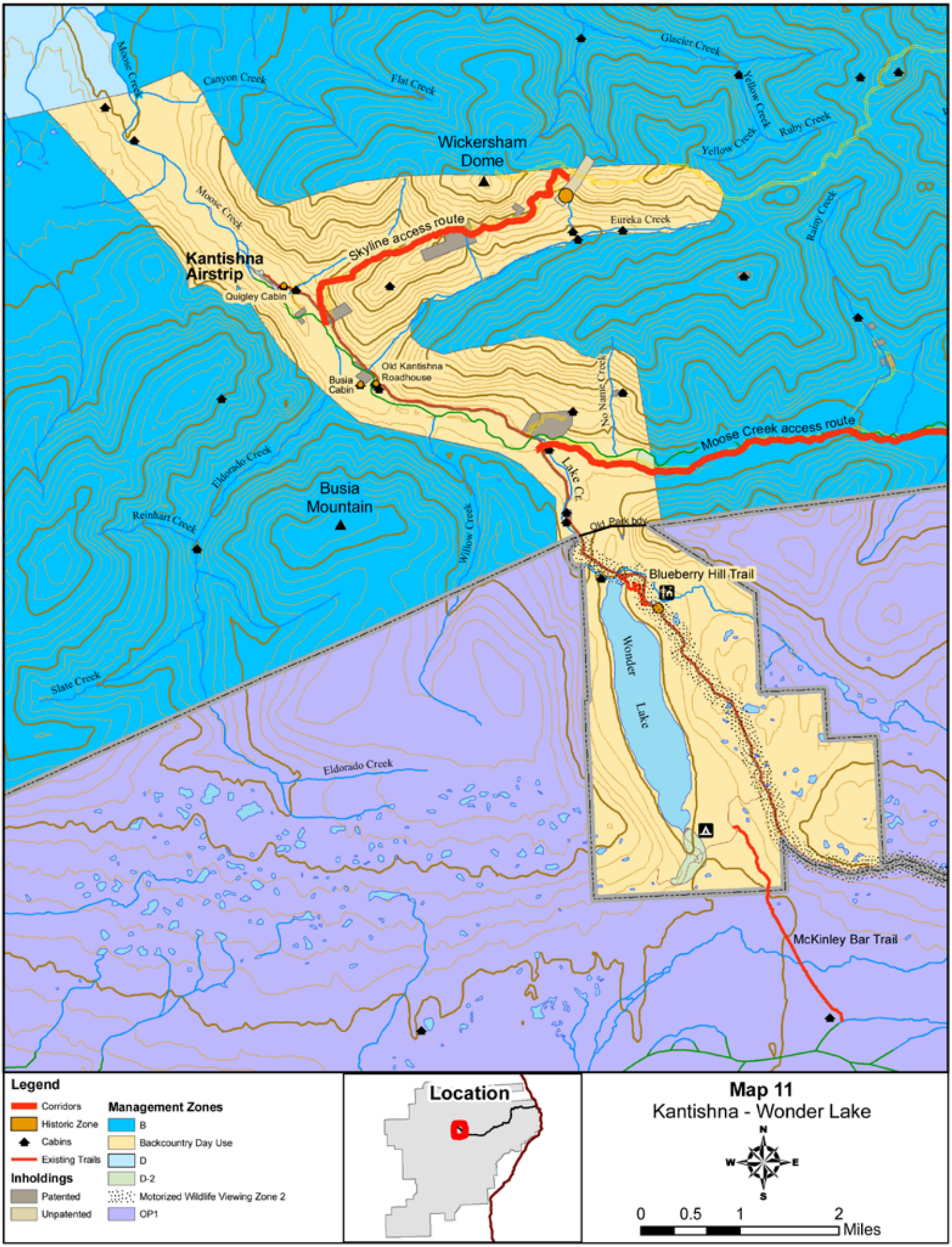
0 0.3 0.6 1.2 1.8 2.4
Miles

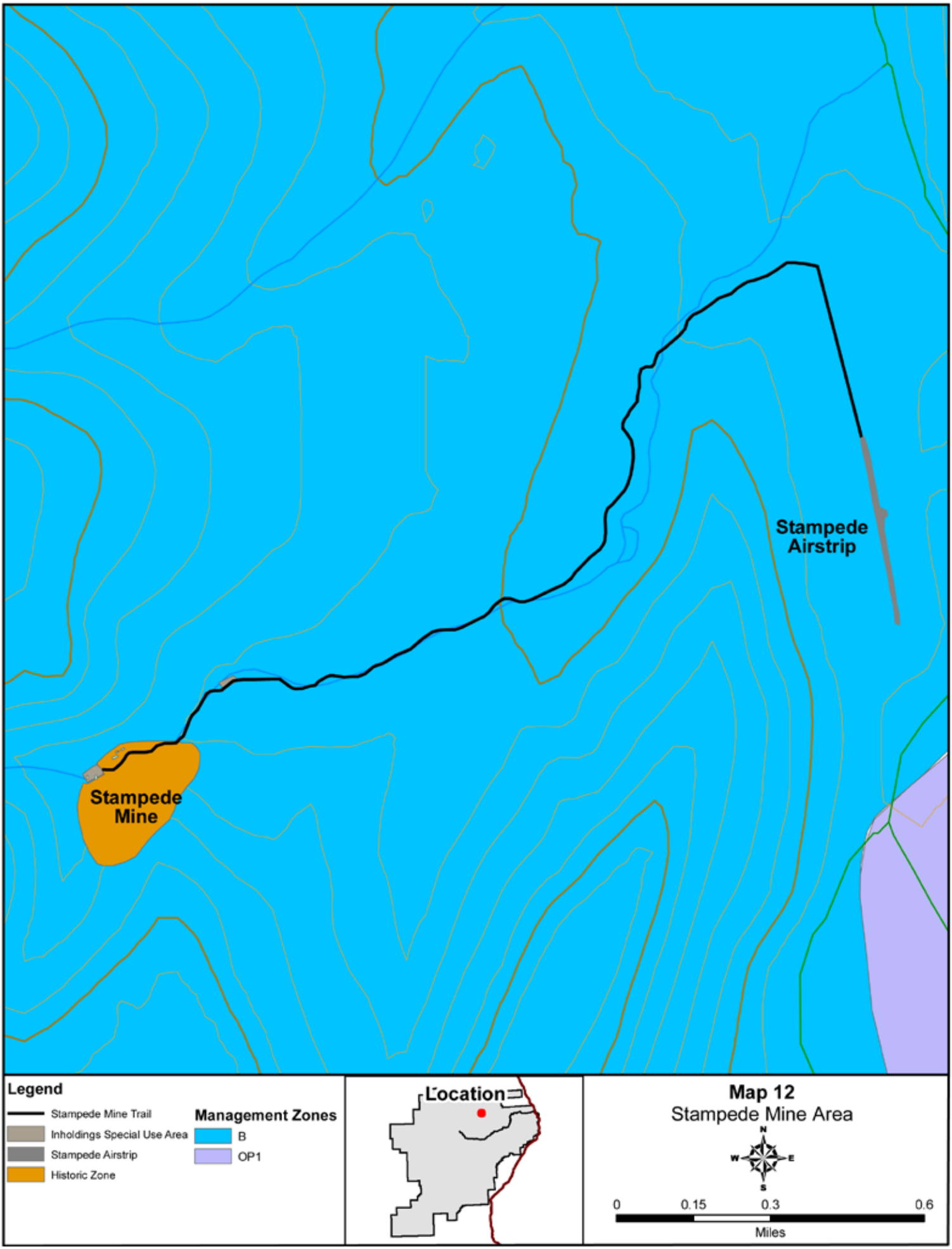

Savage River
Park Road
Primrose Rest Area
Savage River
Savage Cabin
Savage Campground
Legend
Existing Trails
Proposed Trails
Management Zones
Backcountry Day Use
D-1
D-2
Motorized Sightseeing Zone 3
Motorized Wildlife Viewing Zone 1
OP1
Location
Map 7
Savage Area Facilities and Zoning
N
W
E
S
0
0.2
0.4
0.8
Miles

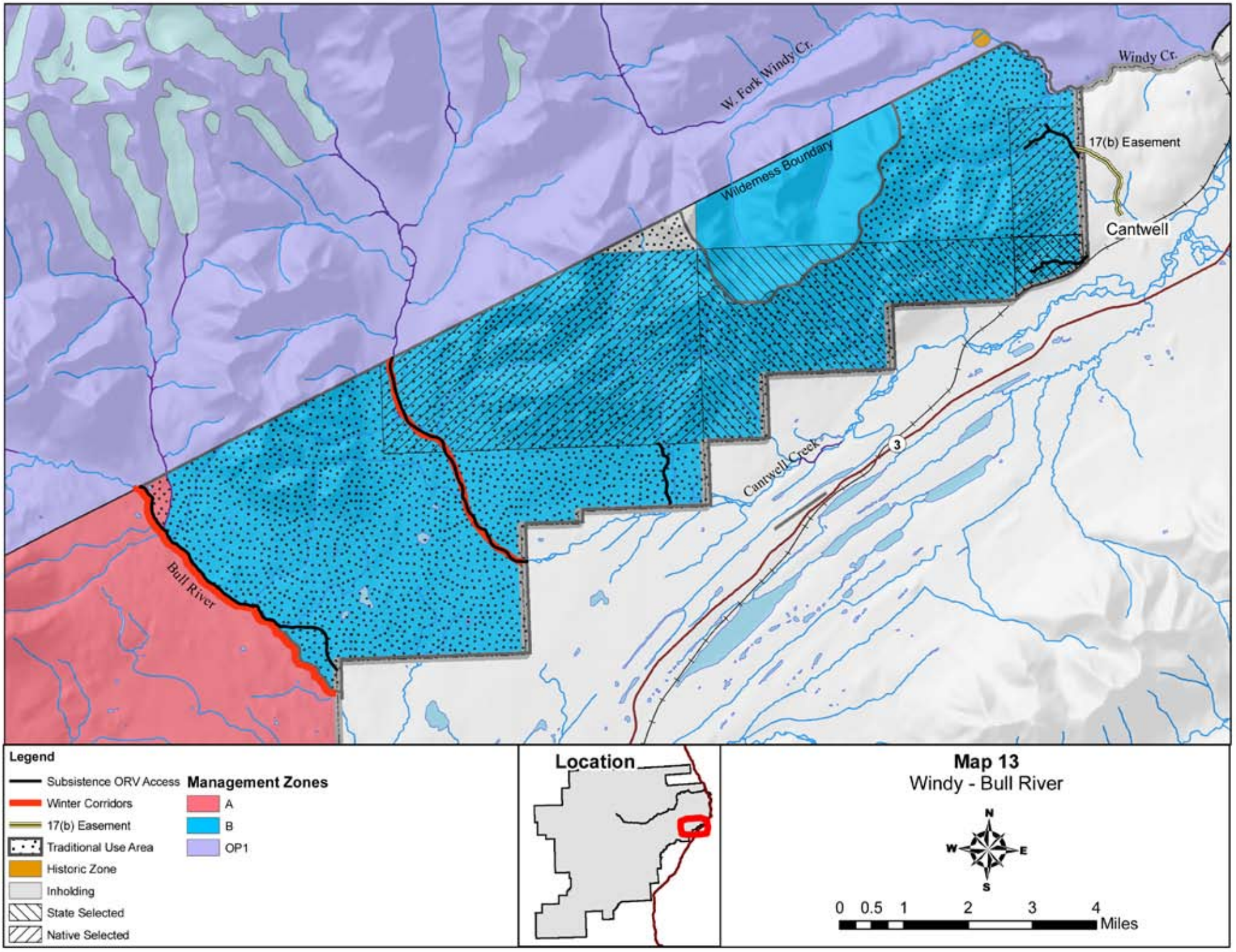

Gravel Pit
Big Creek
Teklanika Campground
Teklanika River
Teklanika Rest Stop
Legend
Parking
Management Zones
Backcountry Day Use
D-1
D-2
Motorized Wildlife Viewing Zone 1
OP1
Location
Map 8
Teklanika Area Facilities and Zoning
N
W
E
S
0
0.25
0.5
1
Miles

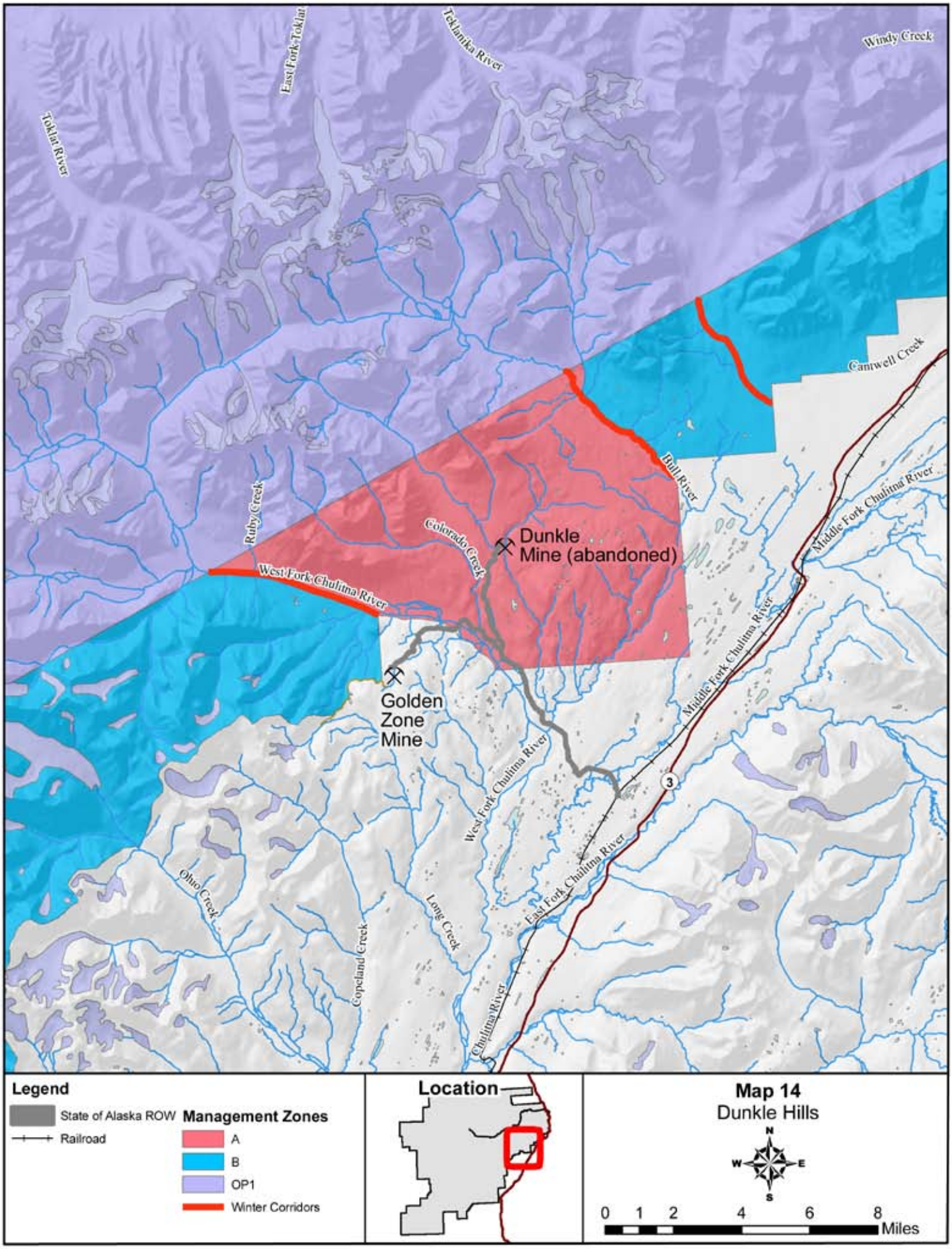

Toklat
Road
Camp
Toklat
Rest Stop
Park Road
Toklat Ranger
Station
Pearson Cabin
Toklat River
Legend
Buildings
Historic Zone
Management Zones
Backcountry Day Use
D-1
D-2
Motorized Wildlife Viewing Zone 2
OP1
Location
Map 9
Toklat Area Facilties and Zoning
N
W
E
S
0
0.25
0.5
0.75
Miles

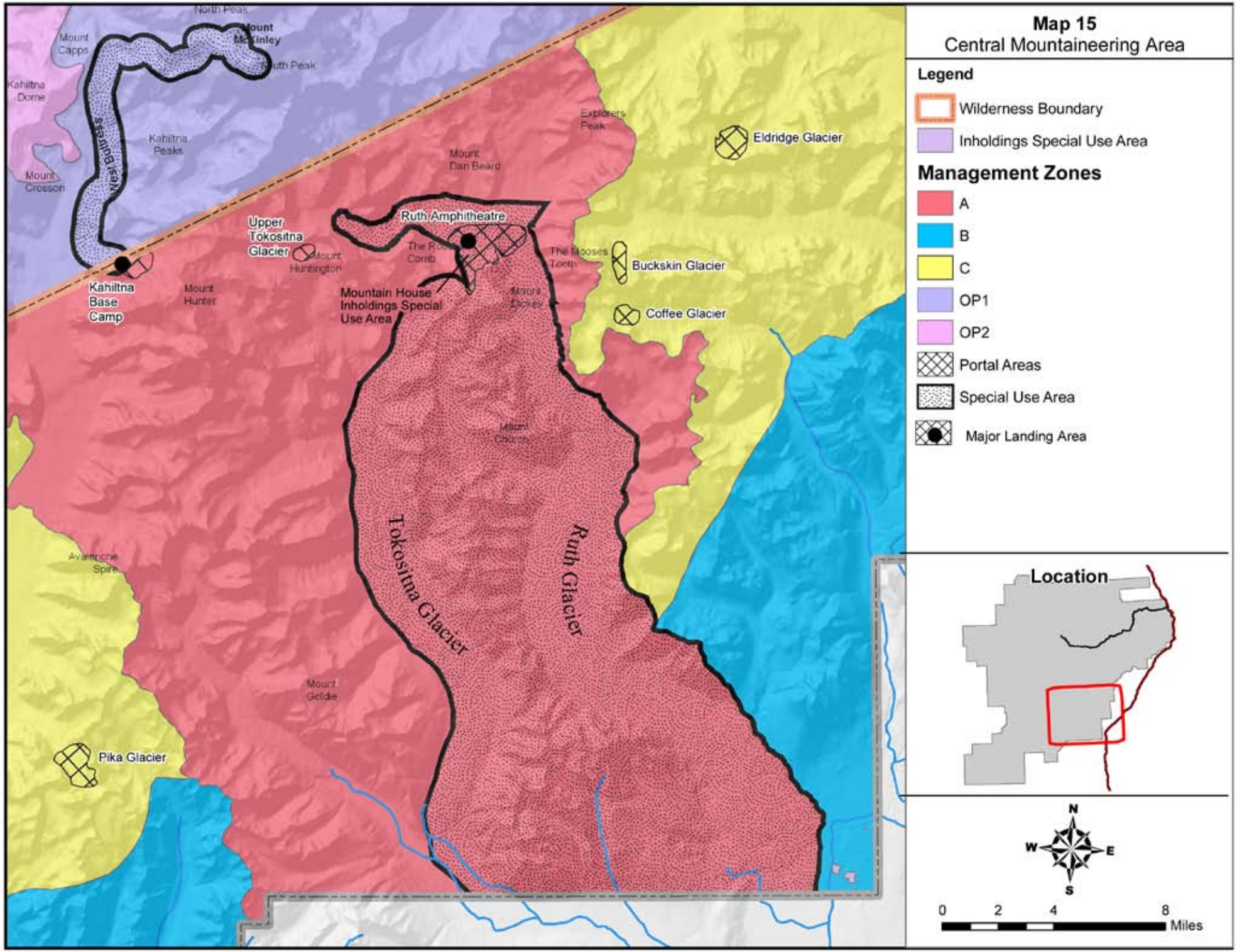

Map 10
Eielson and Stony
Legend
Existing Trails
Proposed Trails
Historic Zone
Management Zones
Backcountry Day Use
D-1
D-2
Motorized Wildlife Viewing Zone 2
OP1
Location
Stony Creek
Stony Overlook
Stony Dome
Moose Creek
Park Road
Eielson Visitor Center
Gorge Creek
River
Thorofare
N
W
E
S
0 0.2 0.4 0.6 0.8
Miles

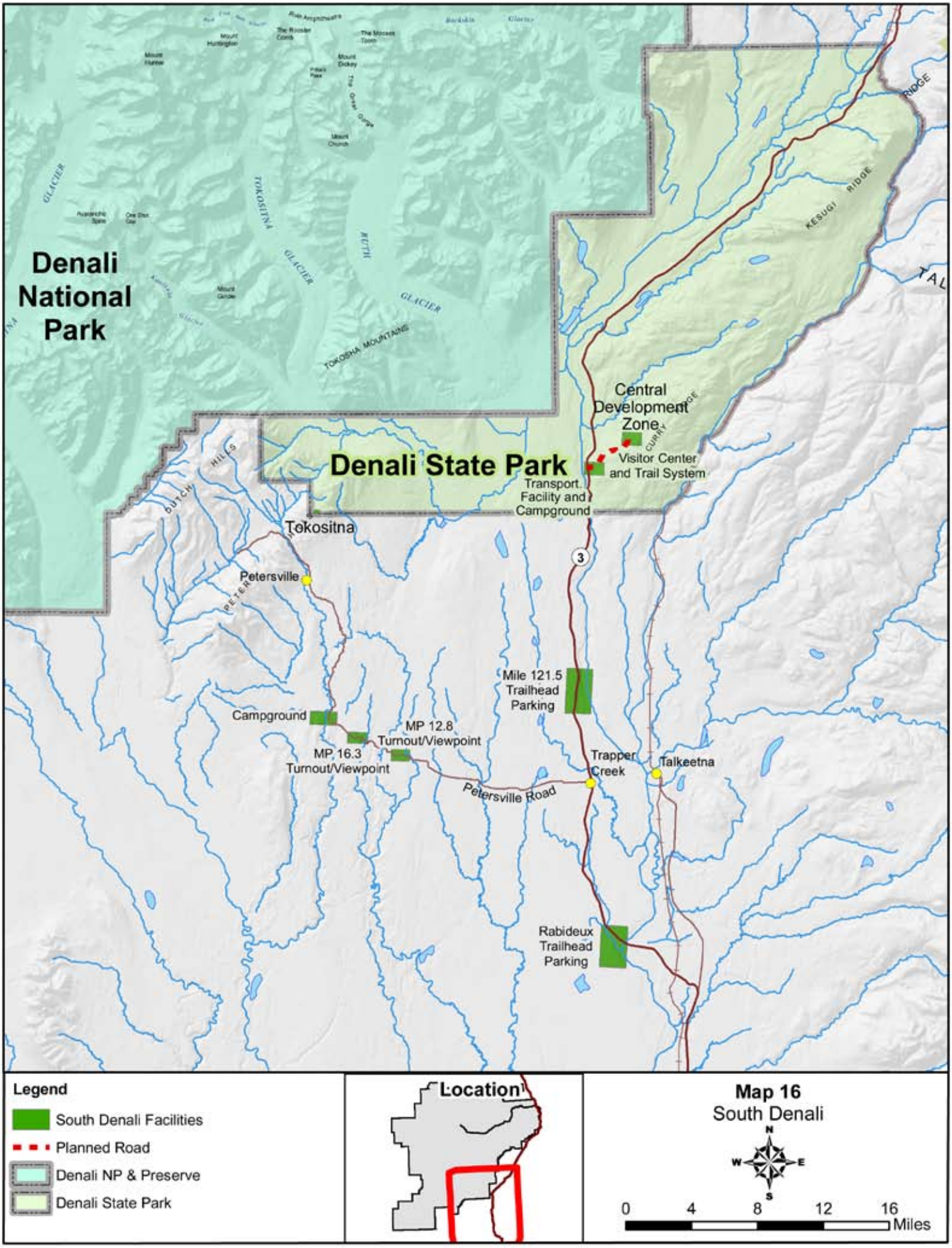

Moose Creek
Canyon Creek
Flat Creek
Glacier Creek
Yellow Creek
Ruby Creek
Yellow Creek
Wickersham Dome
Moose Creek
Skyline access route
Eureka Creek
Rainy Creek
Kantishna Airstrip
Quigley Cabin
Old Kantishna Roadhouse
Busia Cabin
No Name Creek
Moose Creek access route
Eldorado Creek
Busia Mountain
Reinhart Creek
Lake Ck
Old Park hdy
Willow Creek
Blueberry Hill Trail
Wonder Lake
Slate Creek
Eldorado Creek
McKinley Bar Trail
Legend
Corridors
Historic Zone
Cabins
Existing Trails
Inholdings
Patented
Unpatented
Management Zones
B
Backcountry Day Use
D
D-2
Motorized Wildlife Viewing Zone 2
OP1
Location
Map 11
Kantishna - Wonder Lake
N
W
E
S
0
0.5
1
2
Miles

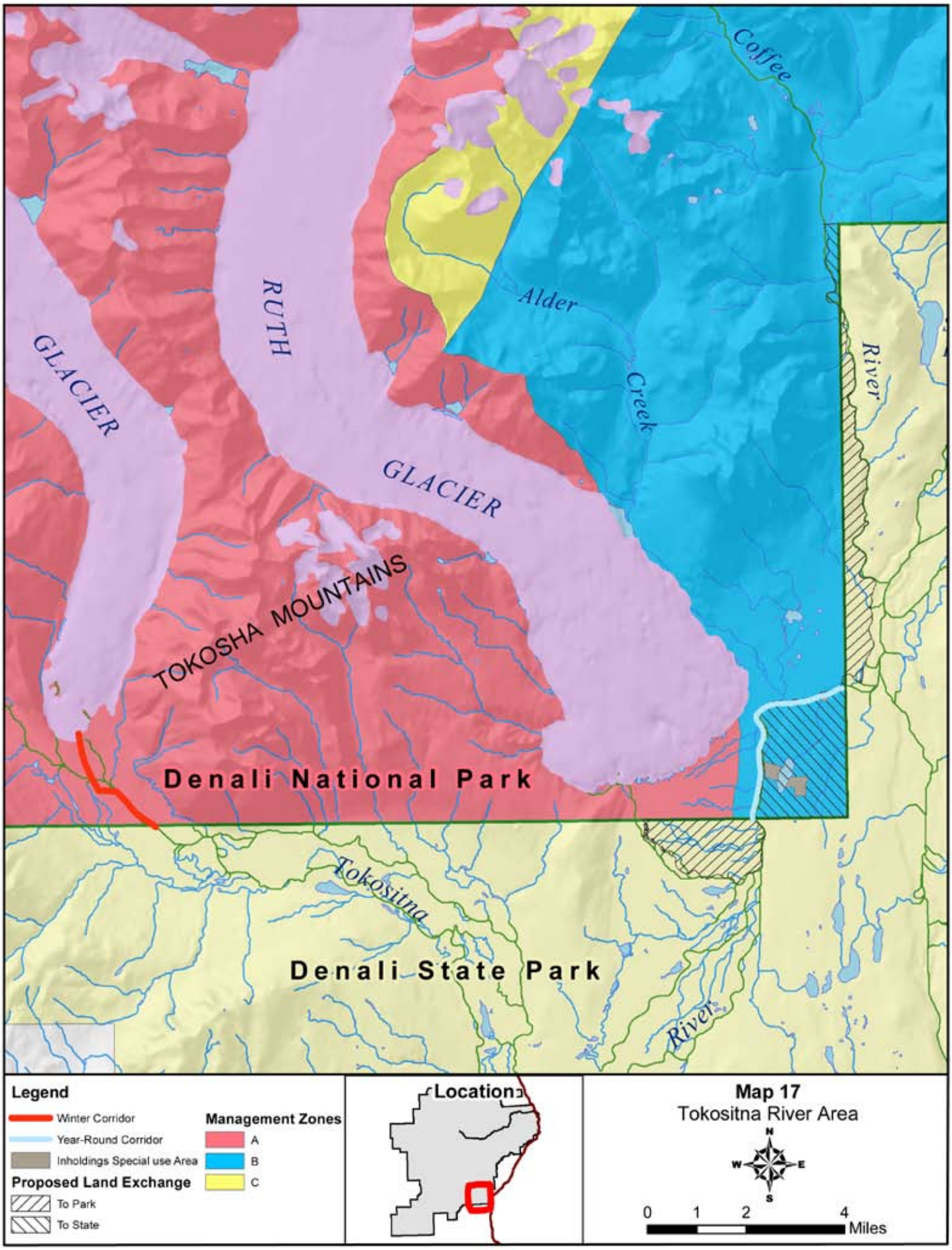

Stampede Airstrip
Stampede Mine
Legend
Stampede Mine Trail
Inholdings Special Use Area
Stampede Airstrip
Historic Zone
Management Zones
B
OP1
Location
Map 12
Stampede Mine Area
N
W
E
S
0
0.15
0.3
0.6
Miles

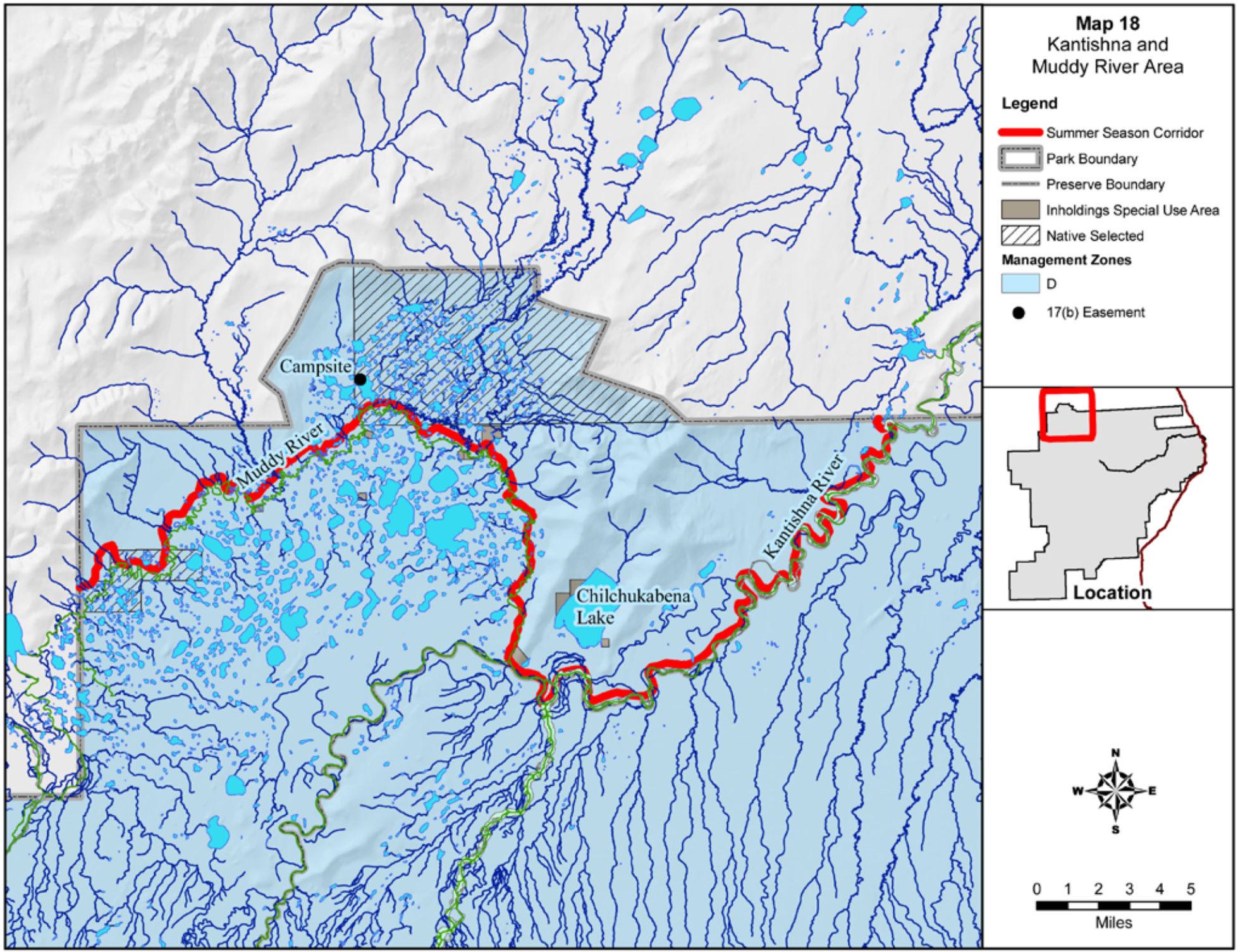

W. Fork Windy Cr.
Windy Cr.
17(b) Easement
Wilderness Boundary
Cantwell
Cantwell Creek
3
Bull River
Legend
Subsistence ORV Access
Winter Corridors
17(b) Easement
Traditional Use Area
Historic Zone
Inholding
State Selected
Native Selected
Management Zones
A
B
OP1
Location
Map 13
Windy - Bull River
N
W
E
S
0 0.5 1 2 3 4
Miles

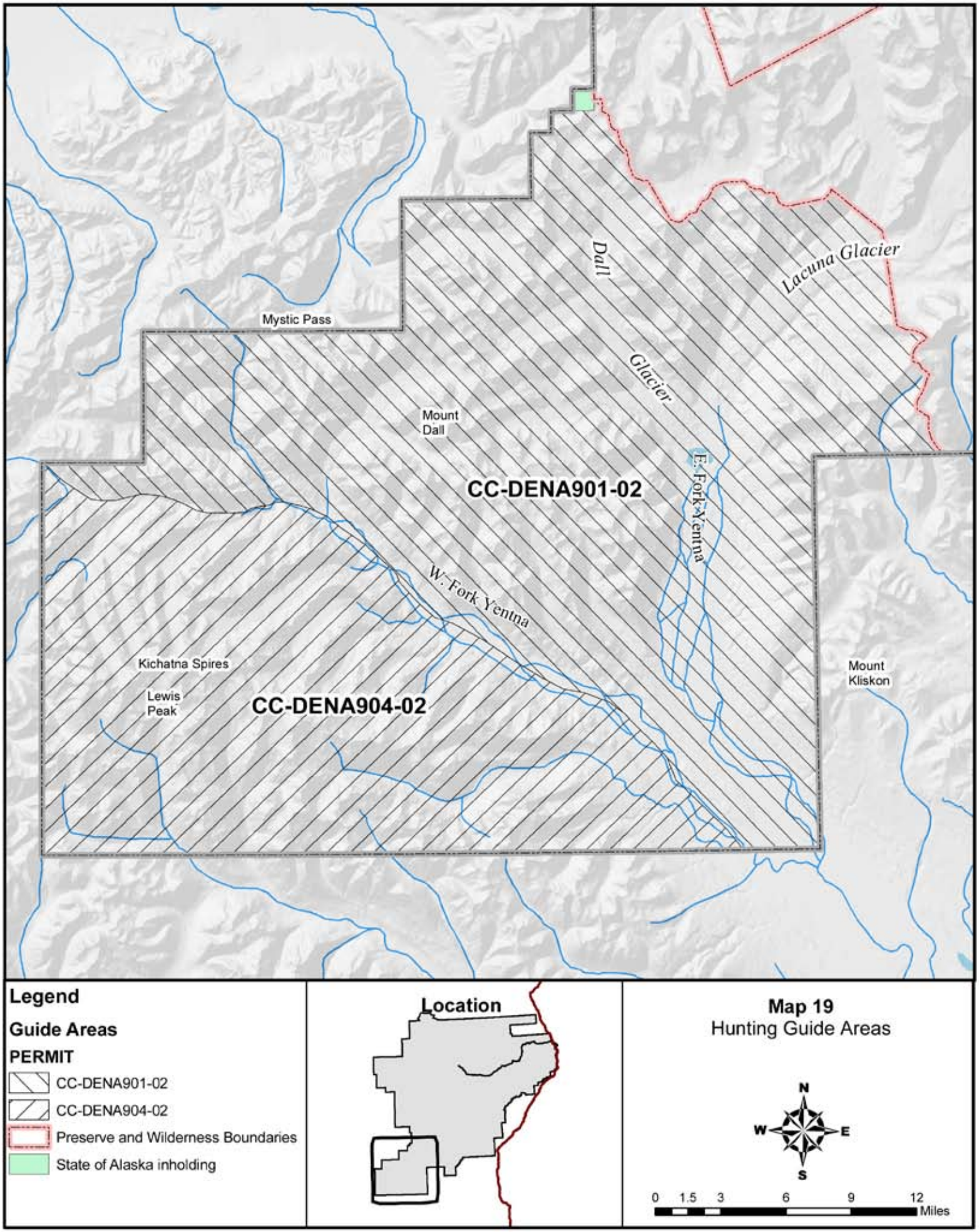

Toklat River
East Fork Toklat
Teklanika River
Windy Creek
Ruby Creek
Colorado Creek
Dunkle
Mine (abandoned)
West Fork Chulitna River
Golden
Zone
Mine
Bull River
Cantwell Creek
Middle Fork Chulitna River
Middle Fork Chulitna River
3
West Fork Chulitna River
East Fork Chulitna River
Ohio Creek
Long Creek
Copeland Creek
Chulitna River
Legend
State of Alaska ROW
Railroad
Management Zones
A
B
OP1
Winter Corridors
Location
Map 14
Dunkle Hills
N
W
E
S
0 1 2 4 6 8
Miles

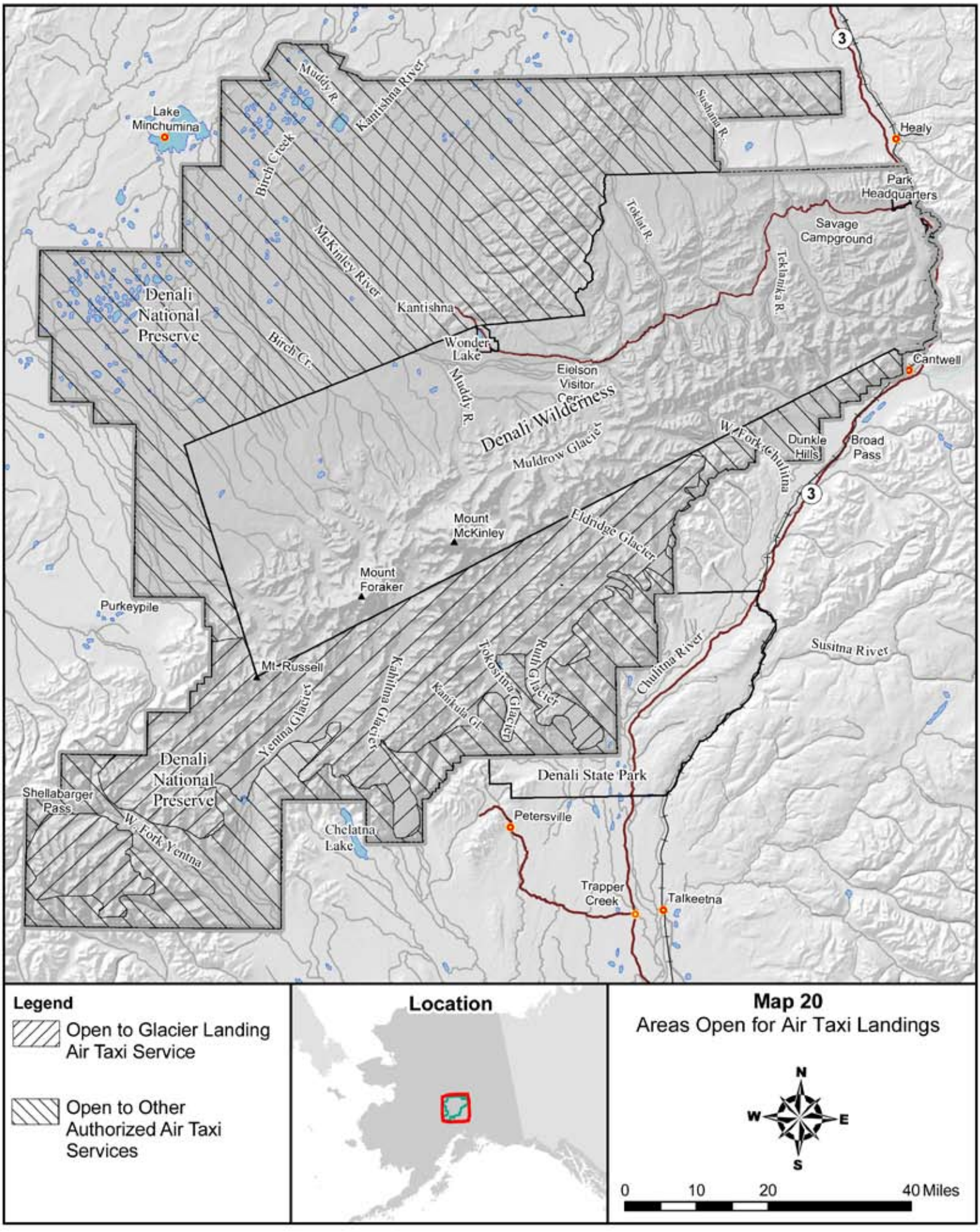

Map 15
Central Mountaineering Area
Legend
Wilderness Boundary
Inholdings Special Use Area
Management Zones
A
B
C
OP1
OP2
Portal Areas
Special Use Area
Major Landing Area
Location
N
W
E
S
0
2
4
8
Miles
North Peak
Mount McKinley
South Peak
Mount Capps
Kahiltna Dome
Kahiltna Peaks
Mount Crosson
West Buttress
Explorers Peak
Eldridge Glacier
Mount Dan Beard
Ruth Amphitheatre
Upper Tokositna Glacier
Mount Huntington
The Roost Comb
The Mooses Tooth
Buckskin Glacier
Kahiltna Base Camp
Mount Hunter
Mountain House Inholdings Special Use Area
Mount Dickey
Coffee Glacier
Mount Church
Tokositna Glacier
Ruth Glacier
Avalanche Spire
Mount Gerdine
Pika Glacier


Denali National Park
Denali State Park
Central Development Zone
Visitor Center and Trail System
Transport. Facility and Campground
Tokositna
Petersville
Mile 121.5 Trailhead Parking
Campground
MP 12.8 Turnout/Viewpoint
MP 16.3 Turnout/Viewpoint
Trapper Creek
Talkeetna
Petersville Road
Rabideux Trailhead Parking
Legend
South Denali Facilities
Planned Road
Denali NP & Preserve
Denali State Park
Location
Map 16
South Denali
0 4 8 12 16
Miles


Coffee
RUTH
GLACIER
Alder
Creek
River
GLACIER
TOKOSHA MOUNTAINS
Denali National Park
Tokositna
Denali State Park
River
Legend
Winter Corridor
Year-Round Corridor
Inholdings Special use Area
Proposed Land Exchange
To Park
To State
Management Zones
A
B
C
Location
Map 17
Tokositna River Area
N
W
E
S
0
1
2
4
Miles


Map 18
Kantishna and
Muddy River Area
Legend
Summer Season Corridor
Park Boundary
Preserve Boundary
Inholdings Special Use Area
Native Selected
Management Zones
D
17(b) Easement
Campsite
Muddy River
Kantishna River
Chilchukabena
Lake
Location
N
W
E
S
0 1 2 3 4 5
Miles


Mystic Pass
Dall
Glacier
Lacuna Glacier
Mount
Dall
CC-DENA901-02
E. Fork Yentna
W. Fork Yentna
Kichatna Spires
Lewis
Peak
CC-DENA904-02
Mount
Kliskon
Legend
Guide Areas
PERMIT
CC-DENA901-02
CC-DENA904-02
Preserve and Wilderness Boundaries
State of Alaska inholding
Location
Map 19
Hunting Guide Areas
N
W
E
S
0 1.5 3 6 9 12
Miles



Legend

Open to Glacier Landing Air Taxi Service

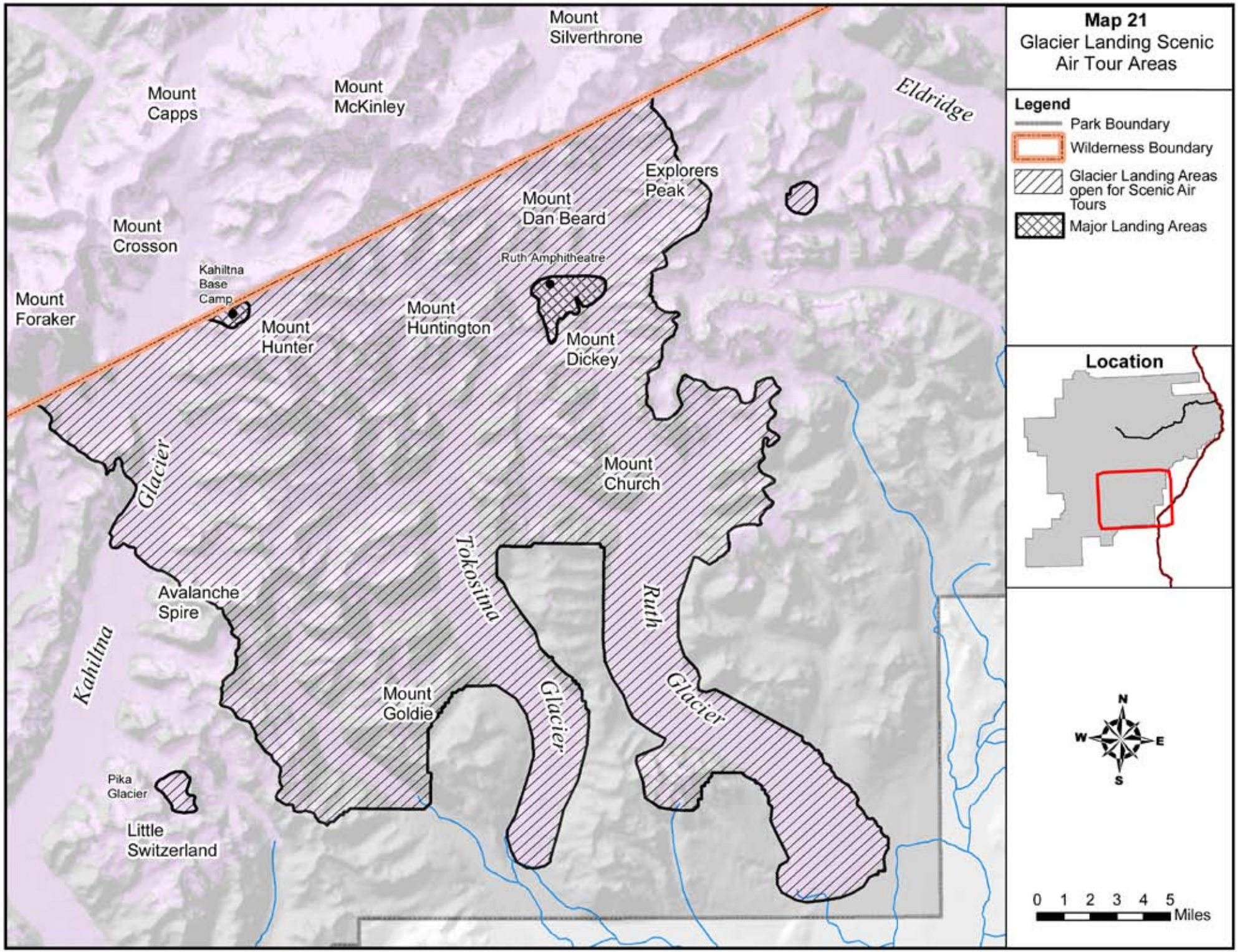
Open to Other Authorized Air Taxi Services

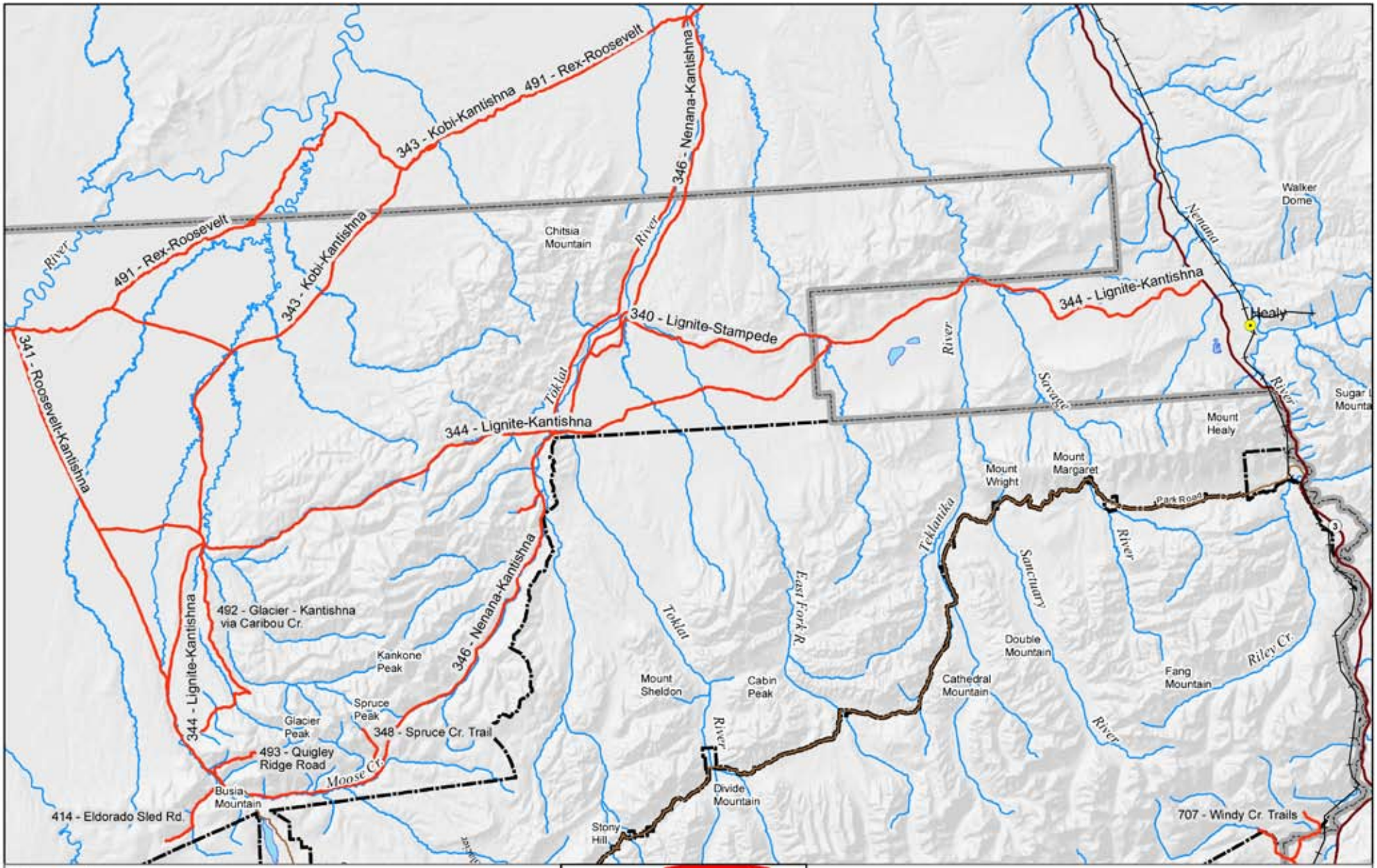
Location

Map 20
Areas Open for Air Taxi Landings

N
W E
S

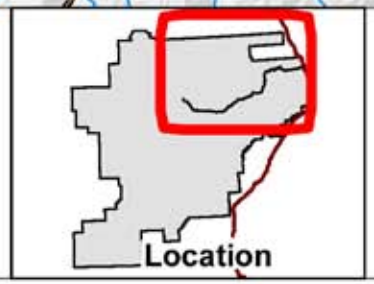
0 10 20 40 Miles


Map 21
Glacier Landing Scenic Air Tour Areas
Legend
Park Boundary
Wilderness Boundary
Glacier Landing Areas open for Scenic Air Tours
Major Landing Areas
Location
Mount Silverthrone
Mount Capps
Mount McKinley
Eldridge
Explorers Peak
Mount Dan Beard
Mount Crosson
Ruth Amphitheatre
Kahiltna Base Camp
Mount Foraker
Mount Hunter
Mount Huntington
Mount Dickey
Glacier
Mount Church
Tokositna
Ruth
Avalanche Spire
Kahiltna
Glacier
Glacier
Mount Goldie
Pika Glacier
Little Switzerland
N
W
E
S
0 1 2 3 4 5
Miles



Legend

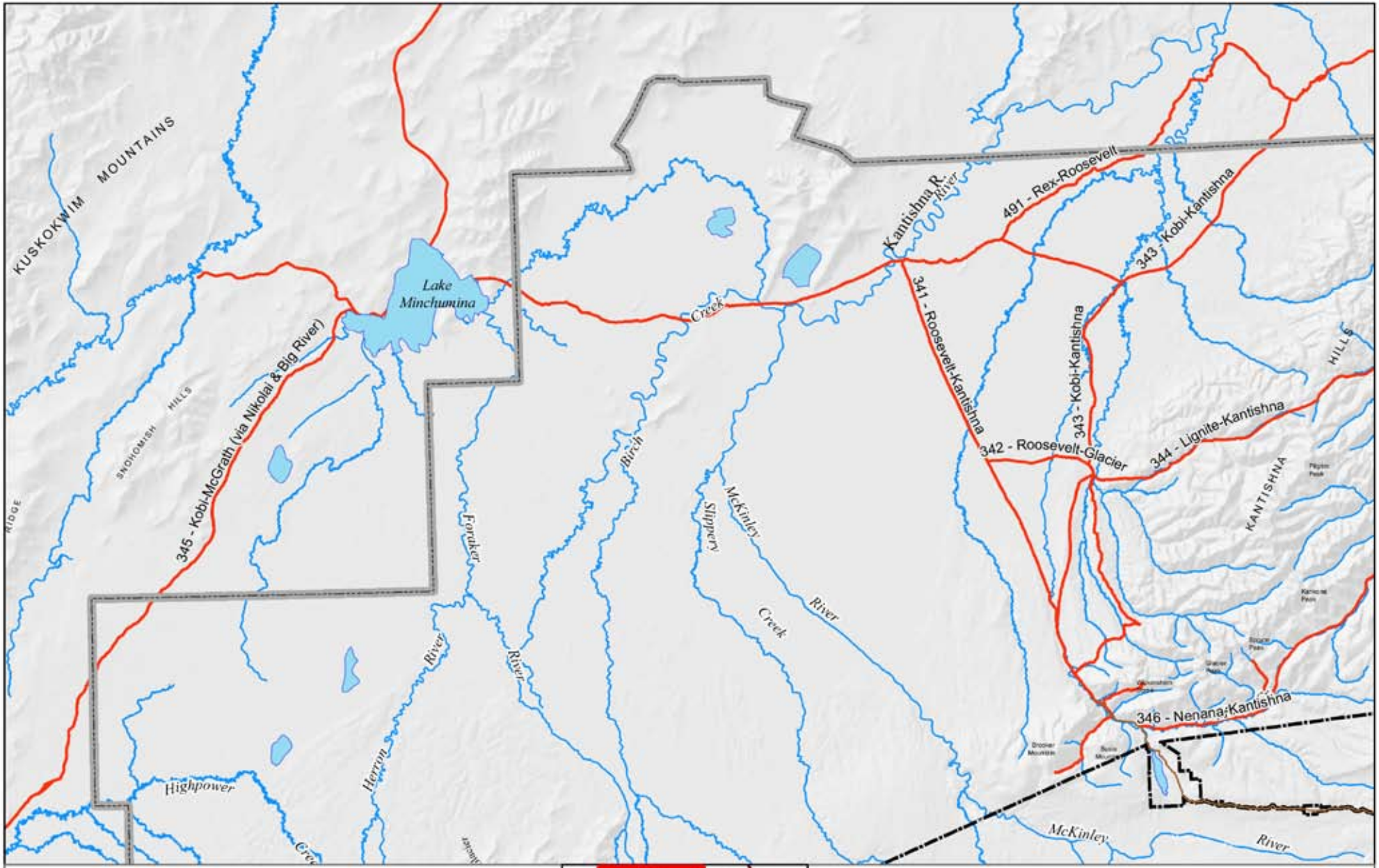
Possible Right-of-Way, listed by State of Alaska

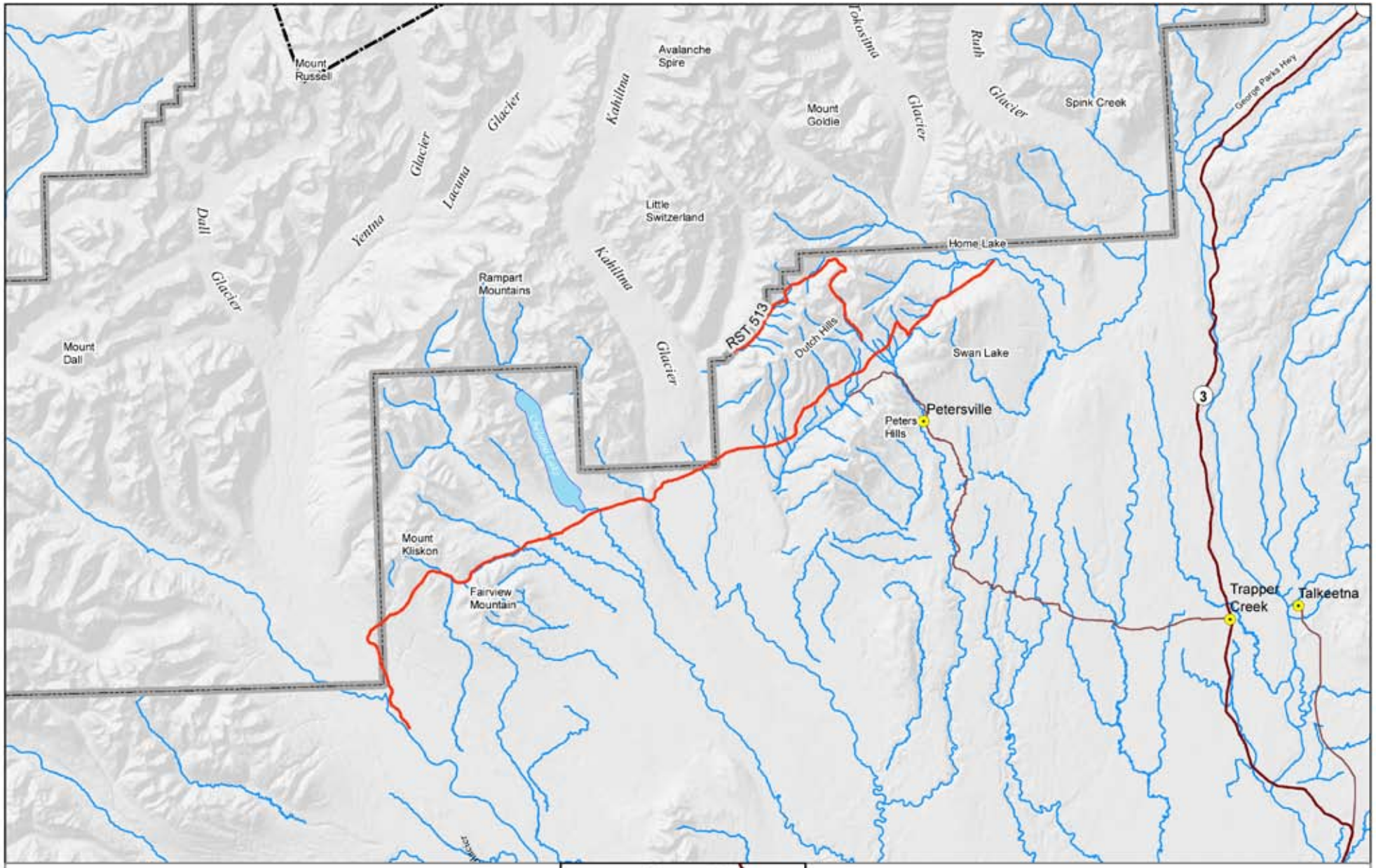


Map 22a

Possible RS2477 Listed by State of Alaska

0 2.5 5 10 15 20 Miles


KUSKOKWIM MOUNTAINS
Lake Minchumina
Creek
Kantishna R.
River
491 - Rex-Roosevelt
343 - Kobi-Kantishna
341 - Roosevelt-Kantishna
343 - Kobi-Kantishna
342 - Roosevelt-Glacier
344 - Lignite-Kantishna
345 - Kobi-McGrath (via Nikolai & Big River)
SNOHOMISH HILLS
KANTISHNA HILLS
Birch
Foraker
Slippery
McKinley
River
Creek
River
River
Herron
River
Highpower
346 - Nenana-Kantishna
McKinley
River
Legend
Possible Right-of-Way, listed by State of Alaska
Location
Map 22b
Possible RS2477 Listed by State of Alaska
0 2.5 5 10 15 20
Miles



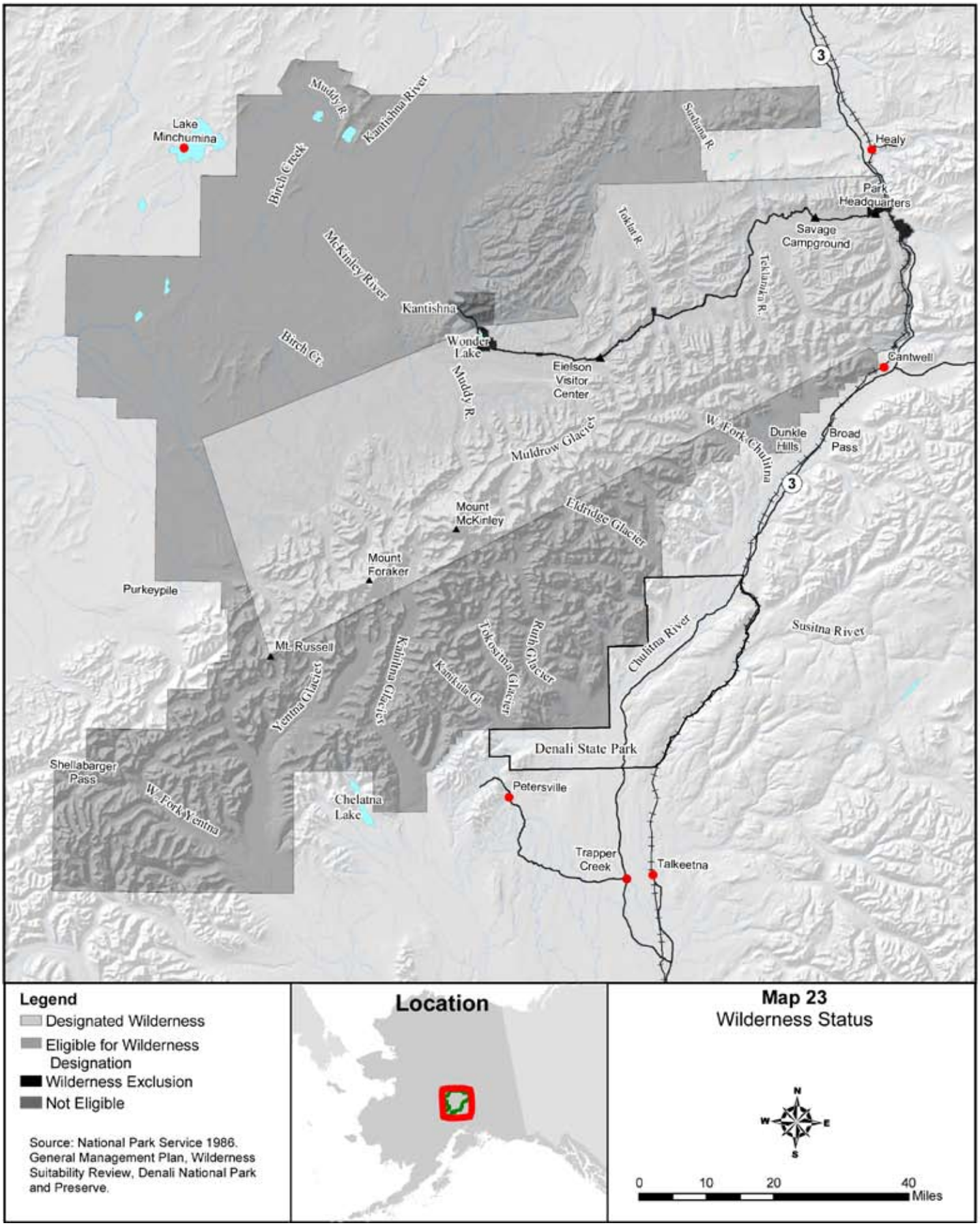
Legend

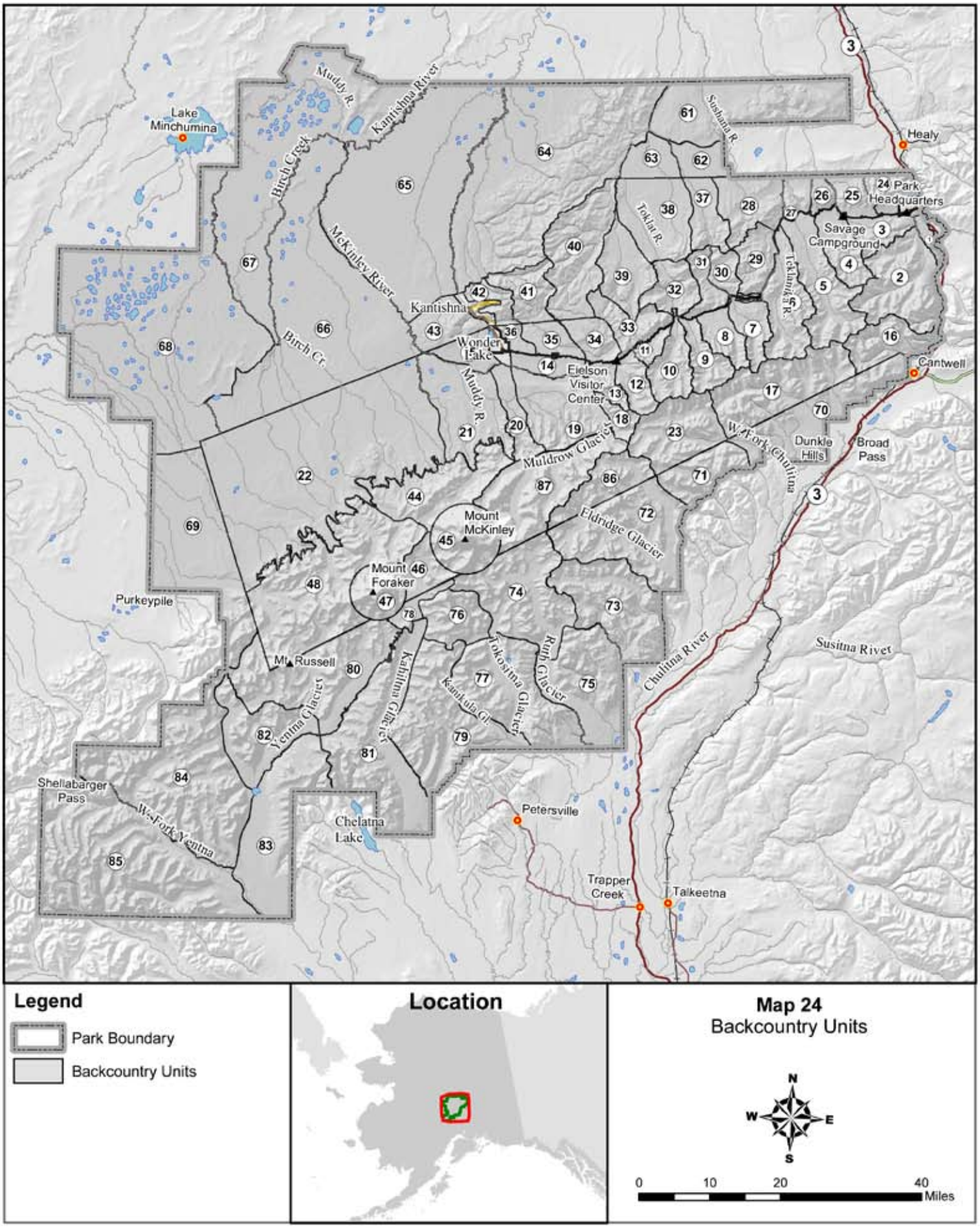
Possible Right-of-Way, listed by State of Alaska

Map 22c

Possible RS2477 Listed by State of Alaska

0 2.5 5 10 15 20 Miles


Lake Minchumina
Muddy R.
Kantishna River
Birch Creek
McKinley River
Birch Cr.
Kantishna
Wonder Lake
Muddy R.
Eielson Visitor Center
Muldrow Glacier
Mount McKinley
Eldridge Glacier
Mount Foraker
Purkeypile
Mt. Russell
Kahiltna Glacier
Yentna Glacier
Kamkula Gl.
Tokositna Glacier
Ruth Glacier
Shellabarger Pass
W. Fork Yentna
Chelatna Lake
Denali State Park
Petersville
Trapper Creek
Talkeetna
Chulitna River
Susitna River
Susitna R.
Healy
Park Headquarters
Savage Campground
Toklat R.
Teklanika R.
Cantwell
W. Fork Chulitna
Dunkle Hills
Broad Pass
3
3
Legend
Designated Wilderness
Eligible for Wilderness Designation
Wilderness Exclusion
Not Eligible
Source: National Park Service 1986. General Management Plan, Wilderness Suitability Review, Denali National Park and Preserve.
Location
Map 23
Wilderness Status
N
W
E
S
0
10
20
40
Miles


Lake Minchumina
Muddy R.
Kantishna River
Birch Creek
McKinley River
Birch Cr.
Kantishna
Wonder Lake
Muddy R.
Eielson Visitor Center
Muldrow Glacier
Mount McKinley
Mount Foraker
Eldridge Glacier
Purkeypile
Mt. Russell
Kahiltna Glacier
Ventna Glacier
Tokositna Glacier
Ruth Glacier
Kanikula Gl.
Chulitna River
Susitna Rivet
Shellabarger Pass
W. Fork Ventna
Chelatna Lake
Petersville
Trapper Creek
Talkeetna
Susitna R.
Healy
Park Headquarters
Savage Campground
Teklat R.
Teklanika R.
Cantwell
W. Fork Chulitna
Dunkle Hills
Broad Pass
Legend
Park Boundary
Backcountry Units
Location
Map 24
Backcountry Units
N
W
E
S
0
10
20
40
Miles