



KANTISHNA AND WONDER LAKE AREA PLAN

RANGE OF PROPOSALS FOR PUBLIC FEEDBACK

Denali National Park and Preserve
July 2019

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CHAPTER 1. INTRODUCTION

GUIDE TO THIS DOCUMENT

The National Park Service is seeking feedback on a range of proposals for the Kantishna and Wonder Lake areas of Denali National Park and Preserve. This document provides an overview of potential facility development proposals for consideration, as well as potential associated actions related to park management, visitor experience, and guided services.

There is still more that the National Park Service needs to know and discuss before developing a preferred alternative for the Kantishna and Wonder Lake areas. The National Park Service is actively flagging potential sites and trails in the Kantishna and Wonder Lake areas in summer 2019 and plans to conduct required cultural resource and wetland surveys in summer 2020. Public comment on this document, the result of those surveys, and continued conversations about visitor capacity and operating cost analysis will help refine this range of proposals into a proposed action in future planning and compliance efforts.

Future planning and compliance efforts will seek additional public comment. No implementation of these proposals can occur until future compliance is complete.

A public summary from this document will be released on the National Park Service's Planning, Environment and Public Comment site (PEPC) following the closure of the public comment period.

HOW TO COMMENT ON THIS DOCUMENT

Public comment is accepted from August 1 to August 30, 2019, at the online commenting tool (PEPC) or via mail.

Find a link to comment on this document at:

<https://www.nps.gov/dena/getinvolved/kantishna-plan.htm>, or

<https://www.parkplanning.nps.gov/kantishnaplan>

Responses by mail can be sent to:

Denali Superintendent
Attn: Kantishna Plan
PO Box 9
Denali Park, Alaska 99755

PURPOSE AND NEED

The purpose of this project is to provide additional recreational opportunities for a growing number of visitors to Denali National Park and Preserve. Previous management guidance has identified backcountry units 41-43 in Kantishna as an area to develop a formal trails system with a roadside campground and backcountry campsites (NPS, 2006ⁱ).

The park has experienced an 11% growth in park visits between 2013 and 2018 (NPS, 2019ⁱⁱ). An estimated 11,000 of the approximately 600,000 park visits are hikes on formal or informal trails in the Kantishna and Wonder Lake areas.¹ Two formal trails currently exist to serve these visitors. A web of informal trails, including some maintained by lodges, has developed. Some informal trails are old mining routes and others are present due to repeated use on poor soils.

There is new private development in the Kantishna area, which may increase the number of visitors spending multiple days in the area.

Expanding guided services to both independent visitors and lodge guests may increase the number of visitors attracted to the area. While future demand for the use of the area is ultimately unknown, park management desires to proactively define the desired visitor experience, formalize a trail system from a network of informal trails, and consolidate the administrative footprint. This will allow park management to mitigate existing resource damage and address potential visitor safety concerns in the predicted event of an increase in the use of the area.

New infrastructure could be constructed in a phased approach.

¹ This number was estimated by NPS staff through analyzing self-reported commercial guided hiking numbers and trail counter totals summarized in the Denali National Park and Preserve 2017 Trail Counter Report.

OVERVIEW OF THE RANGE OF PROPOSALS

The range of proposals currently covers possibilities within different topics: park management, infrastructure, visitor experiences, and guided services. Each of these topics provides or supports additional recreational use in the Kantishna and Wonder Lake areas.

Park Management

- Potential changes to management zones are presented to more accurately reflect how areas are managed or to implement new management zones, such as backcountry campsites.
- The desired conditions for Kantishna and Wonder Lake share statements of aspiration that describe resource conditions, visitor experiences and opportunities, and facilities and services that an agency strives to achieve and maintain in a particular area.

Infrastructure

- Potential recreation infrastructure includes trails, roadside campground(s), backcountry campsites, rustic lodging, and the Wonder Lake day use area.
- Potential transportation infrastructure includes bus depot(s), trailheads and parking, end of the road loop relocation, facilities and utilities to support a shuttle system.

- Potential administrative infrastructure site(s) are described for staff and transient housing, office space, maintenance facilities, parking, and storage.

Visitor Experience

- Visitor descriptions provide a glance at who currently visits the Kantishna and Wonder Lake areas.
- Visitor use trends are trends in how visitors have used and could use the Kantishna and Wonder Lake areas.
- Current and potential future supported uses are described. Supported uses are activities that are authorized and/or encouraged by the NPS.
- Current and potential future visitor flow is described to share how visitors move around the Kantishna and Wonder Lake areas.
- Current and potential future messaging covers important information that needs to be shared with visitors.

Guided Services

- Current and potential new guided services are described.
- The potential method for determining the allocation of use is described based on total visitor capacity of the area.

PLANNING DOCUMENTS THAT PROVIDE MANAGEMENT GUIDANCE

The following planning documents provide background or management guidance for the Kantishna and Wonder Lake areas, which this plan would either supplement or amend.

1997 Entrance Area and Road Corridor Development Concept Plan and Environmental Impact Statement

The National Park Service could develop trails and rehabilitate the north end of Wonder Lake, including along Lake Creek to the north end of Wonder Lake, construct a roadside campground and backcountry campsites in Kantishna, and upgrade or reroute the McKinley Bar Trail.² NPS could adjust backcountry quotas as necessary for units with backcountry campsites dependent on visitor experience and resource protection needs (NPS, 1997ⁱⁱⁱ).

2006 Backcountry Management Plan and Environmental Impact Statement (BCMP)

This plan states that the National Park Service could complete a plan for Kantishna trail and backcountry campsite development, obtain funding, and construct approved infrastructure. NPS could designate Backcountry Hiker areas and, if needed, construct or improve existing informal trails within units 41, 42, and 43 in Kantishna and formalize a trail system in this area. NPS could construct a loop from the water tower above Wonder Lake Campground up to the bench west of Wonder Lake. NPS could implement a backcountry registration system, including advance registration procedures for overnight camping in the Kantishna Hills (NPS, 2006^{iv}).

2008 Consolidated General Management Plan (Consolidated GMP)

This is an internal document that combines like aspects of the environmental impact statements in the park's planning portfolio. The *Consolidated GMP* reiterates that the National Park Service could construct trails, designate camping areas away from areas commonly used by day hikers that could include food storage and sanitation facilities, and implement a registration system (NPS, 2008^v).

² Upgrade and reroute of the McKinley Bar Trail was completed in 1998.

ISSUES CONSIDERED IN DEVELOPING THE RANGE OF PROPOSALS

The following are areas of concern that were identified when developing the range of proposals and are listed as issues to be kept in mind or resolved through the planning process.

Infrastructure

- Existing staff lodging is inadequate. Showers and laundry are located miles from staff sleeping quarters.
- Storage facilities are inadequate for current storage needs.
- Compliance was completed for existing administrative camps with the assumption that they would be temporary. These sites were not meant to be permanent.

Land Status

- The state and the federal government both claim ownership of the Kantishna Airstrip. The National Park Service interprets the quit claim deed³ to mean that the airstrip is federally owned.
- Federal ownership of Skyline Drive Access Route has been challenged. NPS currently manages the access route as a Corridor.
- Land exchanges are in process or are being discussed in the Kantishna area.

³ See FAS Route Number #6021 from the June 30, 1959 Quit Claim Deed issued by the US Department of Commerce to the State of Alaska.

- Existing messaging and infrastructure does not dissuade visitors from exploring private property.
- The 1986 GMP recommended that NPS purchase private inholdings in Kantishna to reduce commercial growth in the area. The NPS has not pursued or received funding to do this since the early 1990s, and also cannot purchase property without willing sellers.

Operations

- The NPS is currently addressing a deferred maintenance backlog and may not have the means to adequately maintain new infrastructure or increased staffing to manage the area.
- Private property owner(s) in the Kantishna area may soon offer winter lodging—a new visitor experience in the area. The NPS has previously not had to regularly maintain infrastructure and support staff year-round in locations with no road access.
- NPS is exceeding the number of vehicles on the Park Road and natural sound disturbances. The most common access to the Kantishna and Wonder Lake area is by vehicle, so providing for increased visitor access to the area remains a challenge.⁴

⁴ The data showing that the park is out of standard with natural sounds disturbance comes from preliminary results of the NPS managed Day Hiker User Survey completed in 2018. Management guidance says no more than 10 natural sound disturbances should occur in eligible wilderness. Approximately 10% of hikers said they heard motorized noise more than 10

Resources

- An informal trails network has developed with varying degrees of erosion from improperly aligned unsustainably created trails.
- Geo-hazard concerns on the state section of road may impede the ability of NPS to reroute trails.
- High levels of arsenic and antimony naturally occur in Kantishna soils and waters, making water sources undesirable for long-term consumption and needing mitigation for soil compaction.
- Designating campsites and trails, and encouraging bike use may increase negative human-wildlife interactions.
- The number of businesses offering guided services is likely to increase in the area as guided hiking contracts are transitioned to Commercial Use Authorizations (CUAs). New lodge developments may also increase the number of guests staying in the area for multiple days. Without a formal trail system use will likely continue on existing informal trails, contributing to further erosion, or new informal trails may develop as groups try to avoid one another.

times. The threshold is set at no more than one motorized noise event in designated wilderness. Nearly half of all surveyed day hikers said they heard noise two or more times.

- The temporary administrative facilities at Dalle Molleville and Wonder Lake Ranger Station have a negative impact on the cultural landscapes because they are not contributing to the period of significance.

Visitor Experience

- Lodges provide maps of the informal trail system. Different trails are advertised, and many have names unique to the lodge. A common visitor experience is not provided on trails and users have a difficult time navigating due to differing trail names.
- There are no easily affordable overnight options in Kantishna adjacent to the Park Road. However, visitors are allowed to camp in the backcountry with a permit.
- The Wonder Lake Campground is the only campground on the west end of the park. It is near-capacity (above 95%) in July and August. No group camping sites exist.
- The day-user experience at Wonder Lake for visitors on the transit bus is to exit the bus at the lake side and walk up the campground road to re-board the bus. The presence of multiple busloads of day users in the campground may impact the campground user's experience.
- Water sources are unreliable enough in the Kantishna Hills that visitors cannot rely upon them.

Safety

- Flooding events put infrastructure and park visitors in danger. Facility relocation out of flood plains and creek rehabilitation may reduce flooding impacts.
- Conflict may exist between vehicles and visitors on bike or foot on the narrowest part of the Park Road in Kantishna.
- A formal trail system may provide a false sense of security in the backcountry.
- Visitors have easy access to walk onto the airstrip putting them directly in the path of fixed-wing aircraft or immediately adjacent to active helicopter rotator blades.
- Unhealthy exposure to water and soil contamination from mining activities and naturally occurring heavy metals is a concern for individuals spending many seasons in the area. Water contamination is not a concern for visitors in the area for short periods. The health and safety impacts of heavy metal presence in the soil are unknown.
- Moose Creek can be challenging to cross, and proposed trail alignments in this plan would require visitors to cross it multiple times, leading to potential safety concerns.
- Visitors may unknowingly put themselves in danger exploring old mining sites, buildings, and shafts.

Transportation

- Transportation to and from Wonder Lake and Kantishna is limited and time-consuming making it challenging for park visitors to recreate on day trips. Backpackers may wait several hours to catch a bus if their departure from the backcountry isn't timed with the bus schedule.
- A Park Road failure could limit or halt road access to the area.
- Encouraging visitor use of the area could result in the need for increased transportation, while the NPS is already exceeding the number of vehicles on the Park Road.

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CHAPTER 2. RANGE OF PROPOSALS

INTRODUCTION

Each of the topics below (park management, infrastructure, visitor experience, and guided services) describes a current condition and a range of proposals the park is considering related to that topic. No proposed action or preferred alternative will be identified until further information is gathered from field surveys, public comment, cost of operations analysis, and a capacity study is completed.

Geographic Scope of Plan

The geographic scope of this planning effort (Figure 1) includes Wonder Lake, Wonder Lake Campground, Wonder Lake Ranger Station, five private lodges that offer commercial services, and the Kantishna Airstrip. The area also encompasses the Kantishna and Wonder Lake Cultural Landscape, several smaller cultural landscapes, the Kantishna mining district, and numerous historic resources that are listed or determined eligible for the National Register of Historic Places.⁵

Wonder Lake is defined as the Old Park Backcountry Day Use Area, and backcountry units 15 and 36. Mile 83.6 to 87.9 of the Park Road travels through the Wonder Lake Area.

Kantishna is defined as the New Park Backcountry Day Use area and backcountry units 41, 42 and 43. Mile 88 to 92 of the Park Road travels through this area, with the road ending before the park airstrip in Kantishna at mile 92.

The Kantishna mining district and backcountry day use areas are ineligible wilderness. The remainder of backcountry units 41, 42, and 43 are eligible wilderness. Backcountry units 15 and 36 are designated wilderness.

Seasons Defined

This range of proposals addresses the summer season. As defined by park management, the summer season begins when the Park Road and airstrip are opened by the Superintendent for use and ends the day before the Road Lottery. The road and airstrip are frequently not open for traffic to Kantishna until late May and can close by early September.

This range of proposals takes into consideration the need for year-round administrative facilities to manage winter operations, but the larger picture of recreation in this area during the winter and shoulder season is defined in the *Winter and Shoulder Season Plan*. This plan is in draft form and expected to be released in 2020 with a compliance document.

⁵ The Kantishna Roadhouse, located near the Kantishna Roadhouse lodging complex, is listed in the national register.

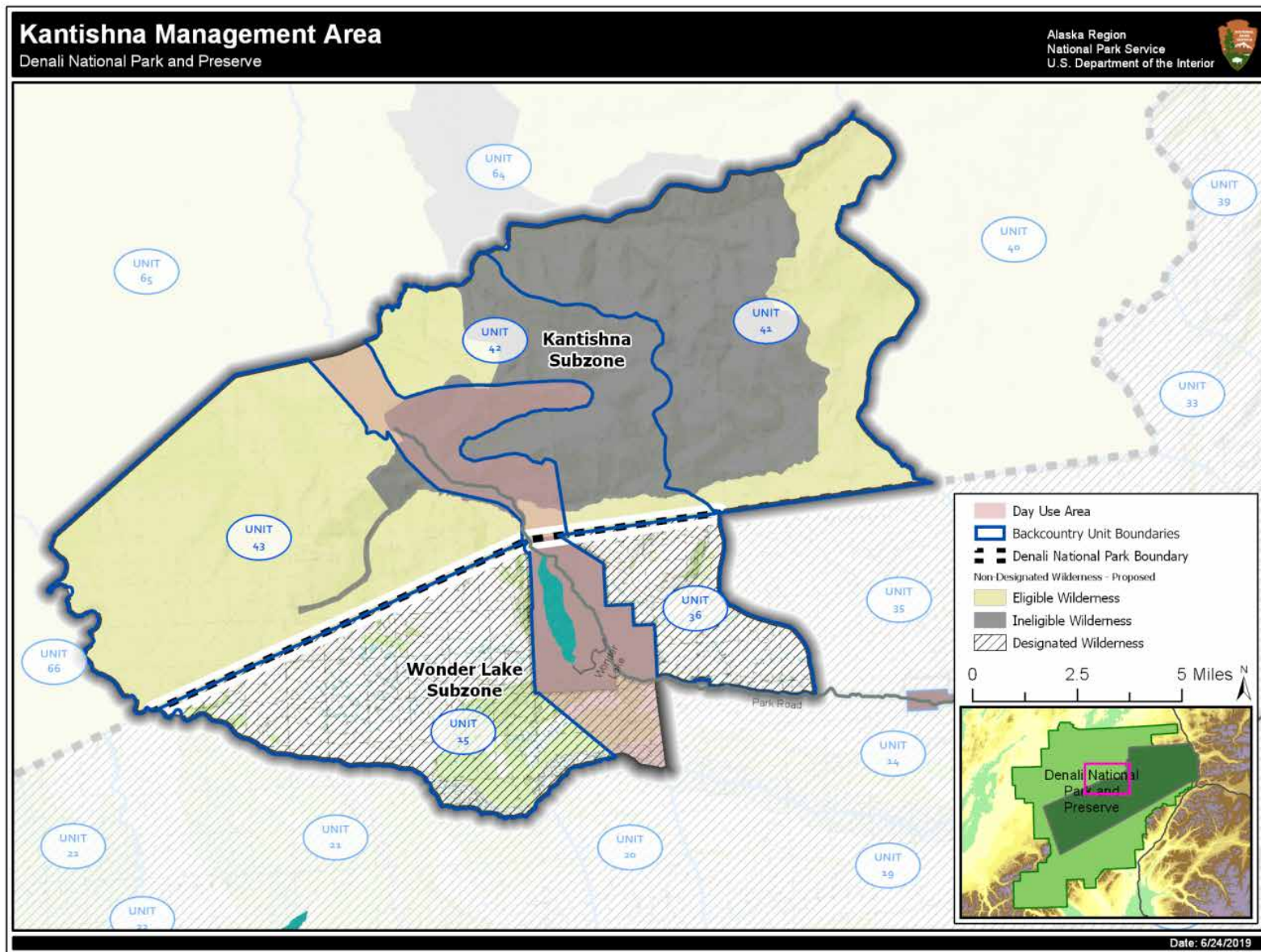


Figure 1. Geographic scope of the plan, including Kantishna and Wonder Lake areas.

PARK MANAGEMENT

Introduction

In this section, potential changes to management zones are presented to more accurately reflect how areas are managed or to implement new management zones, such as backcountry campsites.

Additionally, desired conditions are described for Kantishna and Wonder Lake. The desired conditions for Kantishna and Wonder Lake share statements of aspiration that describe resource conditions, visitor experiences and opportunities, and facilities and services that an agency strives to achieve and maintain in a particular area.

Management Zones

The National Park Service will assess the need for changes in management zones as part of the range of proposals.

Existing Management Zones

Existing management zones are depicted in Figure 2. Full descriptions of the management zones, including their purpose and conditions, can be found in the *2006 Backcountry Management Plan* or *2008 Consolidated General Management Plan*. Shortened descriptions are included below.

Backcountry Day Use Area. Provides a wilderness threshold feeling although it may be close to roads and other development.

Of note: There is a backcountry day use area in both Wonder Lake and Kantishna. Self-reliant recreation is an emphasis in management of the Old Park, so guided activity is encouraged to take place in the New Park, including in Kantishna.

Potential Change: The NPS may consider creating indicators and thresholds to monitor use in this area both on the Park Road and off

the trail. Neither of these areas currently have indicators or thresholds in existing management plans that can be used to monitor and manage use.

Backcountry Hiker. Any designated route or trail that makes the backcountry accessible to many visitors, such as the McKinley Bar Trail.

Potential Change: Day use trails that result from this planning and compliance effort would be identified and managed as backcountry hiker areas.

Corridor. High use travel routes that provide access to remote areas, such as the Moose Creek and Skyline Drive mining routes.

Potential Change:
These will be retained as corridors. High use aircraft landing areas that provide access to remote areas.

Potential Change:
The Kantishna Airstrip could be designated as a portal to more appropriately manage existing use levels. An annual average of 219 roundtrips was taken by commercial operators from 2013–2018 (Maki, 2019^{vi}). This could increase if additional lodging is provided or the park promotes air access.

Management Zone B. Provides opportunities for wilderness recreation suitable for day and overnight users that are remote and require self-reliance, such as the lands surrounding Kantishna. This includes both ineligible and eligible wilderness.

Potential Change: No changes.

Old Park (OP1). Provides opportunities for day use and overnight recreation that is remote and requires self-reliance, such as in the designated wilderness surrounding Wonder Lake.

Potential Change: No changes.

Potential New Management Zone

Backpacking trails and formal backcountry campsites do not currently exist within the park. The NPS could consider developing a new “Overnight Hiker” management zone if backpacking loops and backcountry campsites are developed. This is a new recreational opportunity for the park. The thresholds connected to each of the indicators may vary from existing backcountry zones due to the consolidation of people in designated campsites.

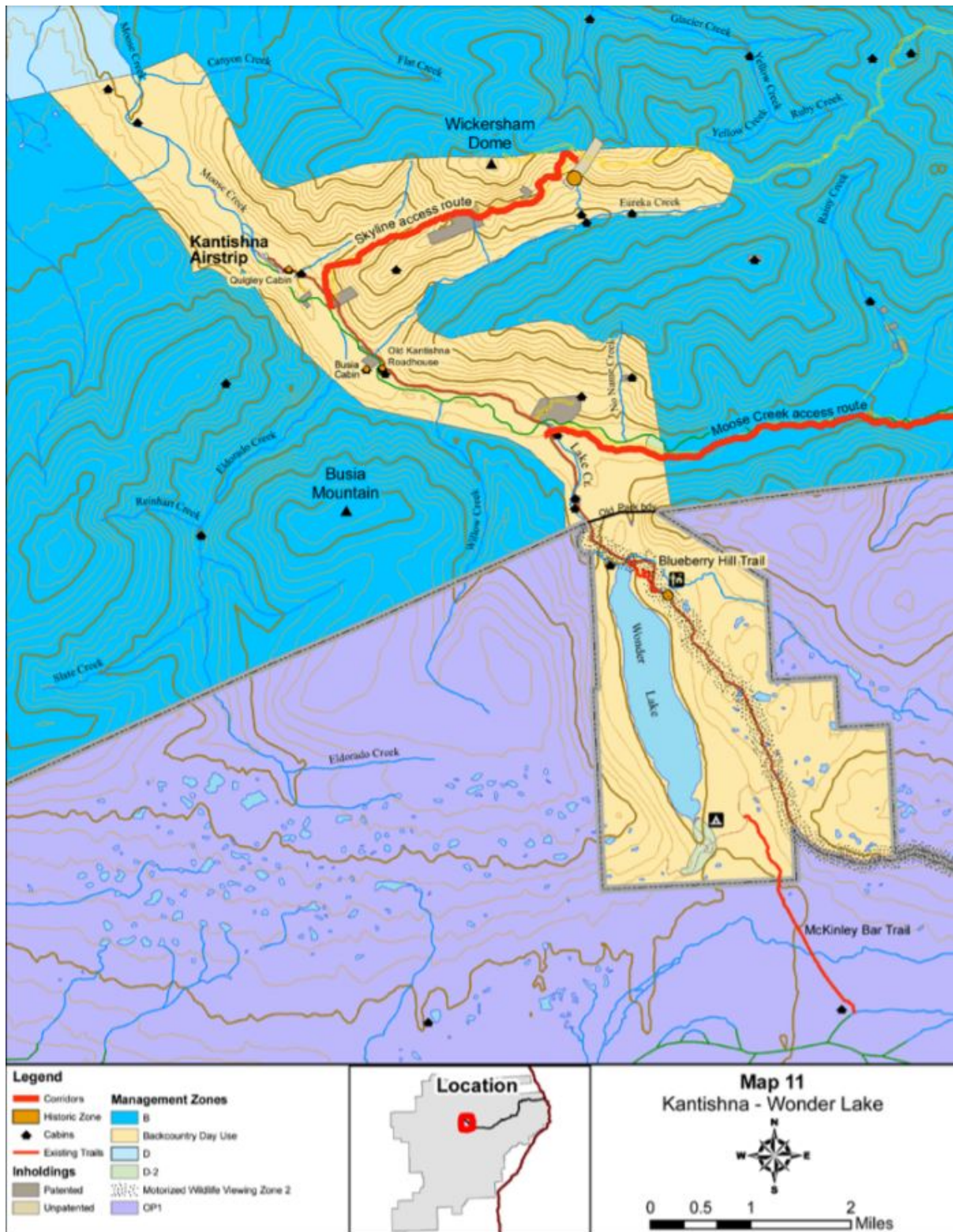


Figure 2. Map of existing management zones (NPS 2008^{vii}).

Desired Conditions

Desired conditions describe the future look, feel, sound, and function of an area. They are vision statements that describe resource conditions, visitor experiences and opportunities, and facilities and services that an agency strives to achieve and maintain in the future (NPS 2017^{viii}).

Desired conditions guide the evaluation of the appropriate types and levels of management, development, and access needed to achieve those conditions.

They also guide the development of indicators, thresholds, and visitor capacity needed for monitoring and adaptive management.

The proposed desired conditions below were built on the purposes defined for management zones B and OP1 in the 2006 *Backcountry Management Plan*.

See Table 1 for desired conditions for the Kantishna area and Table 2 for desired conditions for the Wonder Lake area.

Table 1. Desired conditions for the Kantishna area.

Category	Desired Condition
Overview	Kantishna is a place for visitors to spend multiple days while visiting the park. The area is accessible by bus or air taxi and visitors have a variety of lodging and camping options. Independent visitors can easily navigate the area and available recreational opportunities, including guided recreation. The day use area, including private lodges and an active airstrip, feels like a small community amid wilderness. The backcountry has both wide and confined vistas interrupted by the Park Road, administrative facilities, trails, backcountry campsites, historic sites, and private structures. Kantishna also serves as an access node for deeper exploration into the Alaska Range and designated and eligible wilderness.
Visitor Experience	Kantishna offers a variety of recreational opportunities on trails and off-trail for day and overnight visitors of all abilities. Visitors can draw from the rich history of pioneers and mining exploration in Kantishna to inspire personal exploration and connection with the landscape. A wilderness experience is accessible, including finding solitude and unconfined recreation, although visitors may encounter private lands, old mining site development, and noise from overflights. Visitors may also easily access the Wonder Lake area for additional recreational opportunities. Limited facilities are available near the Park Road and along some trail segments.
Resource Protection	Natural and cultural resources are impacted as little as possible, given the focus of the area as a hub of visitor activity. In some cases, resource conditions are improved from their current condition. Historic and cultural resources are protected in context. Expansive vistas of the Alaska Range remain untouched by infrastructure. Wildlife habitat is protected. Wildlife remains free from the influence of humans, and there are few negative human-wildlife interactions. Natural sounds dominate in the backcountry; however, disruptions from overflights and motorized traffic occur.
Backcountry Management	The backcountry is managed to provide additional recreational support while still preserving a wilderness experience. Recreational infrastructure and support in the eligible wilderness is minimal, but offer trails, pit toilets, and designated camping.
Business Opportunity	Independent visitors and lodge guests can take advantage of a variety of guided recreational opportunities within the day use area, backcountry hiker management areas, and in eligible wilderness.

Table 2. Desired conditions for the Wonder Lake area.

Category	Desired Condition
Overview	Wonder Lake is a place for visitors to spend multiple days while visiting the park. The area is accessible primarily by bus. Campground and backcountry opportunities are available for overnight visitors. Independent visitors can easily navigate the area and available recreational opportunities. The backcountry contains some trails in the designated wilderness with sweeping views of Denali and the Alaska Range. Designated wilderness is managed to provide remote and self-reliant wilderness recreation, but does include trails and guided hiking opportunities. Infrastructure immediately adjacent to Wonder Lake is designed to support appropriate levels of day use.
Visitor Experience	Wonder Lake offers a variety of hiking opportunities that provide scenic views of the Alaska Range or connections to Kantishna for day and overnight users. A campground and dispersed backcountry camping opportunities are available for overnight visitors. The day use area outside of the campground and road corridor has wide vistas with few interruptions from developed infrastructure.
Resource Protection	Natural and cultural resources are minimally impacted, and in some cases, resource conditions are improved. Expansive vistas remain untouched by infrastructure. Sensitive wildlife habitat is protected. Wildlife remains free from the influence of humans, and there are few negative human-wildlife interactions. Natural sounds dominate when away from the campground or road corridor with some disruptions from overflights. An unconfined wilderness recreation experience is available for those that seek it.
Backcountry Management	The backcountry is designated wilderness and managed to provide remote and self-reliant wilderness recreation. Guided hiking is limited to formal trails designated for that use.
Business Opportunity	Independent visitors and lodge guests can take advantage of a variety of guided recreational opportunities within the day use area, backcountry hiker trails and designated wilderness in the Wonder Lake area.

INFRASTRUCTURE

Introduction

This section first describes current infrastructure in the Kantishna and Wonder Lake areas, followed by a range of potential new infrastructure proposals, organized by recreation, transportation, and administrative infrastructure categories.

- Potential recreation infrastructure includes trails, roadside campground(s), backcountry campsites, rustic lodging, and the Wonder Lake day use area.
- Potential transportation infrastructure includes bus depot(s), trailheads and parking, end of the road loop relocation, and the facilities and utilities to support a shuttle system.
- Potential administrative infrastructure site(s) are described for staff and transient housing, office space, maintenance facilities, parking, and storage.

Current Infrastructure

The analysis area has two formal trails, three mining access routes, a network of informal trails, one airstrip along the Park Road, several backcountry airstrips, a campground at Wonder Lake, the Wonder Lake Ranger Station, and staff sleeping quarters or offices spread out over four *temporary* locations. Additionally, there are five private lodges, the possibility for additional lodges, and several private inholdings in the area. This infrastructure is spread out over 8.4 miles of the Park Road, as well as several miles from the Park Road on side routes and driveways.

Although some holistic thought has been given to how the area could function in the *1997 Frontcountry Plan*, *2006 Backcountry Plan*, and *2016 Draft Cultural Landscape Report*, none of these plans provide enough detail for the NPS to consider the cumulative impact of the proposed infrastructure or the operational support needed for it to maintain it. This plan seeks to gather information detailed enough to analyze proposed infrastructure.

Range of Potential Future Infrastructure

An overview of the recreation, transportation, and administrative infrastructure is provided within this section, followed by specific infrastructure proposals for consideration.

Each infrastructure proposal is considered on its own merit as well as in how it contributes to meeting desired conditions described in the “Park Management” section (Table 1 and Table 2).

In consideration of these proposals, the NPS should ensure that a trail system is constructed sustainably, that visitor facilities have the ability for phased growth, and that administrative facilities are adequate, comfortable, year-round, and are also able to accommodate phased growth.

Recreation Infrastructure. The range of potential infrastructure under consideration that directly serves recreation includes up to 80 miles of day and overnight trails, an additional roadside campground, up to five backcountry campsites, rustic lodging, and a day use area.

Transportation Infrastructure.

Transportation infrastructure under consideration supports access to the Kantishna and Wonder Lake areas, and access within the Kantishna and Wonder Lake areas.

Access to the area includes use of the Kantishna Airstrip and the Park Road, and looking at commercial access via concessioner or lodge bus, plane, and/or permitted private vehicles.

Access within the areas includes connecting trails, biking support (trails and storage), shuttle system, bus depots, and parking.

Administrative Infrastructure.

Administrative infrastructure under consideration would be strategically placed and planned, and include new housing for up to 25 employees, office space, maintenance shop, meeting space, and necessary utilities.

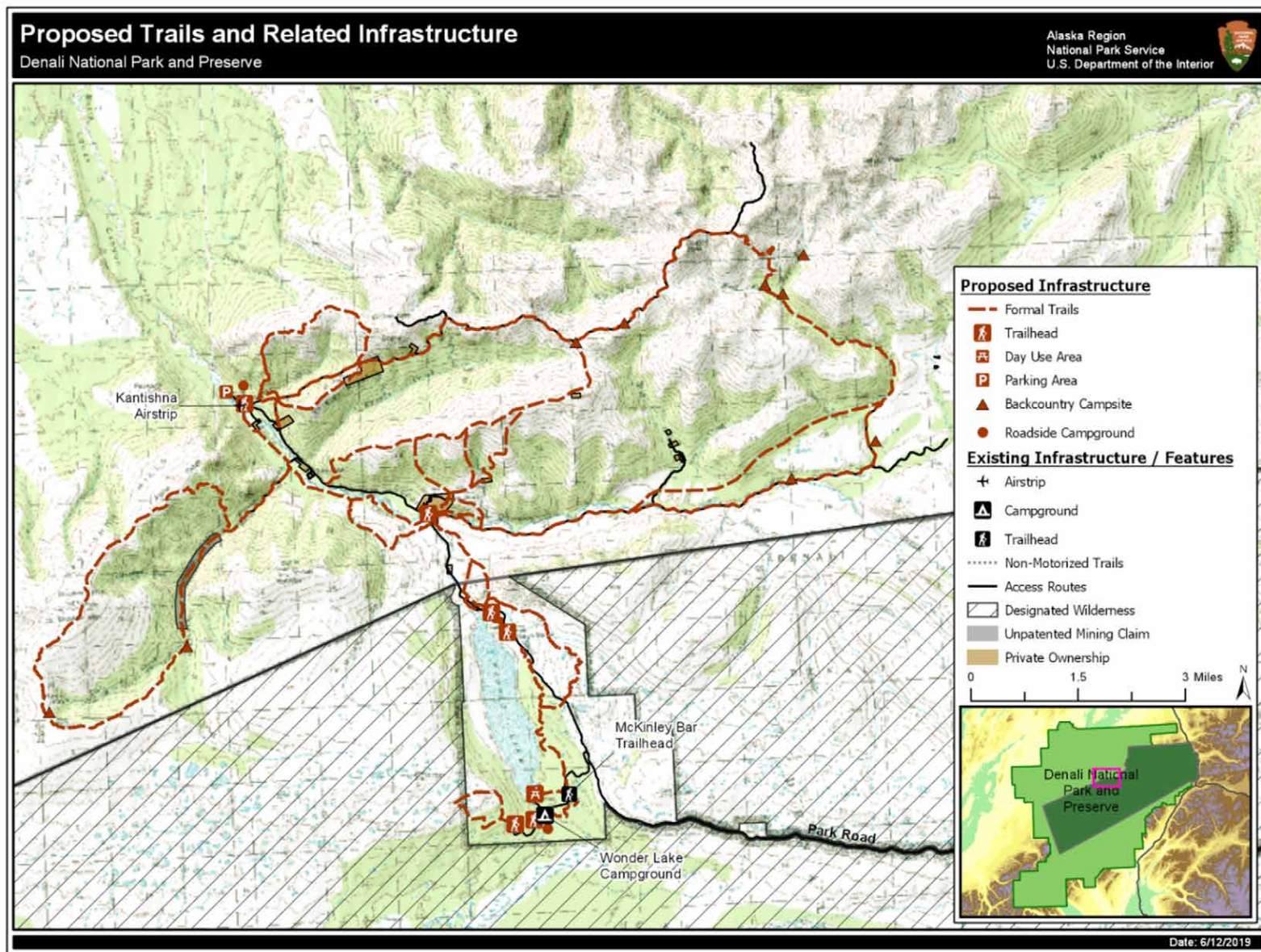


Figure 3. Range of potential recreation infrastructure, including trails, trailheads, day use area, campgrounds, and backcountry campsites.

Recreation Infrastructure

Recreation Infrastructure: Access Roads

Roads may need to be constructed or improved to access the roadside campground utilities or administrative facilities. If roads are not handicap accessible then handicap accessible trails must also be constructed to that visitor node.

Access routes to private inholdings, including Moose Creek, Skyline Drive, and Eldorado, will be maintained as motorized routes although they may be considered as part of a trail.

Recreation Infrastructure:	Roadside Campground
Primary User	Primary User
<i>Current:</i> Independent visitors, local families	<i>Desired:</i> Independent hikers and backpackers, bicyclists, local groups, families, guided groups
Visitor Experience	Visitor Experience
<p><i>Current:</i> The Wonder Lake campground provides a camping experience in a pristine setting with sweeping views of the Alaska Range. Evenings are generally calm and quiet, and during the day campers are encouraged to explore the McKinley Bar Trail or hike the Park Road.</p> <p>The Wonder Lake Campground attracts Alaskans more than other park campgrounds. The campground can be reserved months in advance, displacing some backpackers, bicyclists, or others with last-minute planning needs when the campground nears capacity in July and August.</p> <p>The campground is a hub of activity during the day. Day users are dropped off by bus near Wonder Lake and wander through the campground to find views of Denali and re-board their bus.</p> <p>No campground exists in Kantishna. Backpackers using units 41-43 or bicyclists on the Park Road that don't reach the backcountry will occasionally camp within the backcountry day use area.</p>	<p><i>Desired:</i> NPS provides an affordable and accessible camping option in the Kantishna area with easy access to a variety of trails and interpretive opportunities. This opportunity could alternatively be expanded in Wonder Lake.</p> <p>The area surrounding the campground is quiet in the mornings, but otherwise a hub of activity. The campground design accommodates limited day use and in the evening encourages social time among campers with an attractive gathering space.</p> <p>It serves as the furthest west jumping-off point on the Park Road to explore the backcountry.</p> <p>Some sites could be walk-in only or reserved for backpackers and bicyclists.</p> <p>Camping could be limited to 14 nights annually with no more than seven consecutive nights for both commercial operators and independent visitors.</p> <p>The group campsite provides for a shared experience. Guided group use of the Washburn Trail could be limited to those staying at group campsite if constructed at Wonder Lake.</p>

Recreation Infrastructure: Roadside Campground	
Development Components	Development Components
Overall	<p>Three options are being considered for roadside campground improvements. A walk-in backpacker/bicycle campground with a footprint of approximately 2 acres could be located (option 1) in Kantishna on the north side of the airstrip across from the access road, or (option 2) on the bench above the temporary Friday Creek administrative camp where previous mining camps have been located. Alternatively, (option 3) the Wonder Lake Campground could be expanded.</p> <p>This campground, offered at any of the three locations, could include up to 10 campsites, including a group site, accessible site, cook shelter, food storage, drinking water holding tank, a pit toilet, bike storage, and appropriately designed tent pads.</p> <p>Rustic lodging could be co-located with the campground, and utilities could be constructed so that they could accommodate both uses.</p> <p>Road access would be needed for administrative use to maintain utilities. The campground could be managed by NPS and reservations could be accepted via the park concessioner.</p>
Friday Ridge Campground	<p>This site would require a new access road. If the road is not accessible, then an accessible trail would also need to be constructed. The existing Friday Creek Administrative Camp and its access experience annual flooding and aufeis, so the footprint and access road cannot be repurposed for a campground. The administrative camp would be deconstructed and the site rehabilitated. Permafrost may exist under the proposed campground site but can be mitigated through construction techniques or by providing time for the ground to settle before use. The area has been stable through time, and no known geo-hazards exist.</p>
Airstrip Campground	<p>There is a beaver dam complex near the airstrip that could flood the campground. The area in general is boggy than other proposed sites so tent pads would be on raised platforms. This location may only be a desirable camping experience to those accessing the area by plane. Implementing time constraints for when commercial flights may land or take-off could be considered with this option.</p>
Wonder Lake Campground	<p>Up to 10 additional sites could be added to the current 28 independent sites. Additional cook shelters, food lockers, and Sweet Smelling Toilet (SST) could be provided based on the number and location of new sites.</p>
Group Campsite	<p>This site could accommodate a group of up to 12 on 3 tent pads. Picnic tables, cook shelter, and food lockers could be consolidated on a larger pad. Flush toilets could be available to the group site if constructed at the Wonder Lake Campground. The group campsite should have an American Disabilities Act (ADA) accessible pad.</p>

Figure 4. Approximate location of proposed roadside campground at the Kantishna Airstrip (white shading).

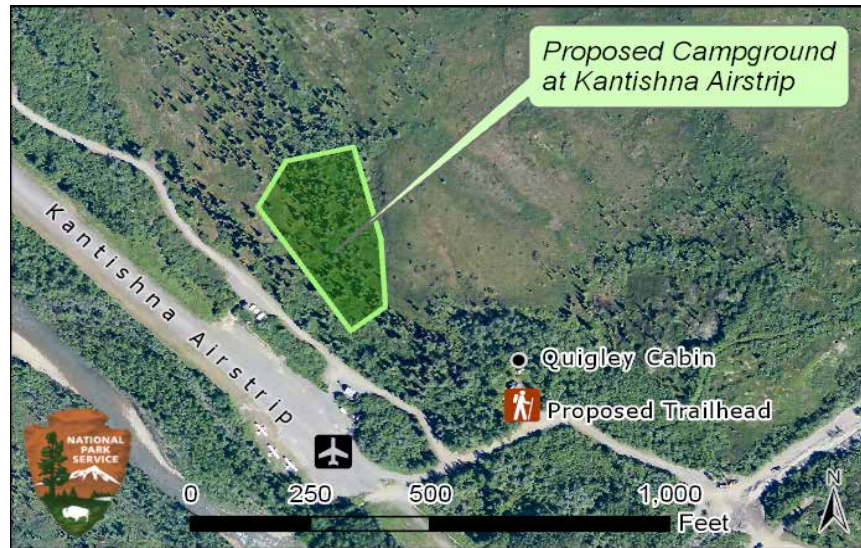
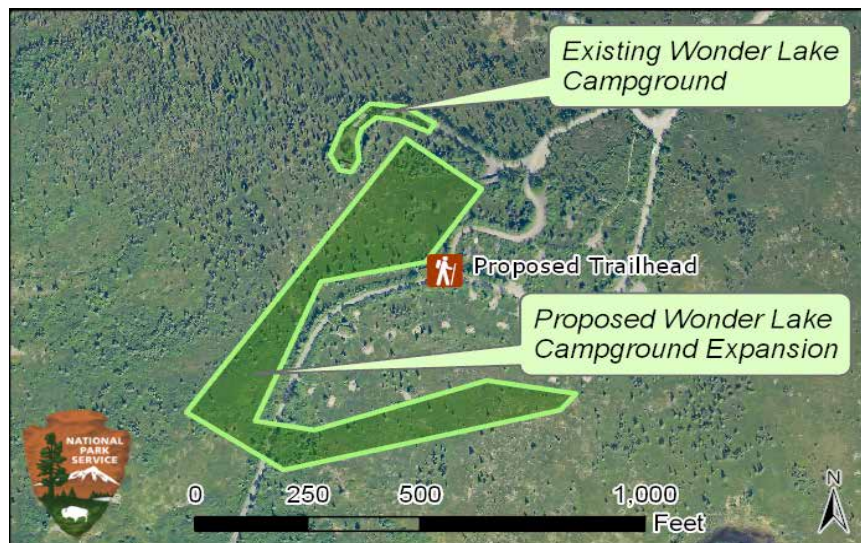


Figure 5. Approximate location of the proposed roadside campground on Friday Ridge (white shading). An old mining access road can be seen, but it is not at an accessible grade. Friday Creek Admin Camp is also visible and would be rehabilitated.



Figure 6. Approximate location of the proposed Wonder Lake Campground expansion (white shading).



Recreation Infrastructure:	Backcountry Campsites
Primary User	Primary User
<i>Current:</i> None exist in the park currently.	<i>Desired:</i> Independent backpackers with moderate backcountry skills, local groups, guided groups
Visitor Experience	Visitor Experience
<i>Current:</i> None exist in the park currently.	<i>Desired:</i> These rustic established backcountry campsites would offer a peaceful setting with good visibility of surrounding ridges to backpackers experiencing the Brooker or Taylor Loops.
Development Components	Development Components
<i>Current:</i> None exist in the park currently.	<p><i>Desired:</i> Up to five backcountry campsites with one to three tent pads each, including group sites, could be located along with the Brooker and Taylor loops. If installed, backcountry campsites would have pit-style toilets, food storage, cooking area, and tent pads. The pit-style toilets would need to have removable barrels that can be transported and pumped off-site. Food storage could be a locker or an area to store bear barrels. Backcountry campsites could accommodate groups of up to 12, dependent upon the number of tent pads at the site. A reservation system could be put in place to manage use.</p> <p>Cultural resources near or visible from a trail or developed camping area would need interpretive signage. Messaging could be offered on signs at trailheads, on existing infrastructure at designated campsites, or low to the ground near the site itself. Digital mediums could also be explored.</p>

Recreation Infrastructure:	Rustic Lodging
Primary User	Primary User
<i>Current:</i> Administrative use and dog mushing contract clients	<i>Desired:</i> Independent day hikers and backpackers, local groups, families, guided groups
Visitor Experience	Visitor Experience
<p><i>Current:</i> No affordable lodging exists in the Kantishna area for independent visitors, families, and groups that aren't set up for the backcountry.</p> <p>Temporary shelter is available for clients with the dog mushing contract during winter months.</p>	<p><i>Desired:</i> The Kantishna area surrounding the rustic lodging is quiet in the mornings, but otherwise a hub of activity. From the rustic lodging there is easy access to a variety of trails and interpretive opportunities to connect with the natural and human dimensions of Kantishna. The rustic lodging could be co-located with the campground and would be designed to encourage social time with attractive gathering space.</p> <p>This could be an affordable option for independent and guided visitors. It could be managed as a full- or partial-service operation as part of the Type 1 contract or could be minimal in its offerings requiring guests to bring their own sleeping bags, mosquito netting, etc.</p> <p>Rustic lodging could be reservable by independent and commercial groups and could be set up to be used by winter concession contracts.</p> <p>No rustic lodging will exist at the Wonder Lake Campground if it is expanded.</p>
Development Components	Development Components
<i>Current:</i> Quinzees that sleep four to six are placed along the road corridor during	<i>Desired:</i> Rustic lodging could be co-located with a campground in Kantishna and could be a single four-sided structure with bunk beds, or a

Recreation Infrastructure:	Rustic Lodging
winter months. Small cabins at Dalle Molleville also provide wintertime shelter.	series of three-sided shelters or small cabins/quincees. It could sleep up to 12, including an enclosed kitchen space shared with campers, and have shared pit toilets and water tank facilities with the campground.

Recreation Infrastructure:	Wonder Lake Day Use Area
Primary User	Primary User
<i>Current:</i> Transit bus users	<i>Desired:</i> Transit bus users, guided day hikers, Wonder Lake area campers
Visitor Experience	Visitor Experience
<i>Current:</i> Visitors are dropped off at the southern end of Wonder Lake where they have 10 to 20 minutes to take pictures, walk the road up to the bathrooms, and re-board the bus near the campground.	<i>Desired:</i> The Wonder Lake Day Use Area is an inviting space for visitors to stretch their legs and get some fresh air after a long journey on the road. There are a variety of trails leaving from the area that offer sweeping views of the Alaska Range and Wonder Lake. Visitors feel that the destination is worth the journey whether they are in the area for a 20 minutes transit stop, a half day, or several nights. Guided dayhikers could spend up to a half day in the area, using it as a meeting location. Overnight campers could use it as an evening gathering space with views of the lake.
Development Components	Development Components
<p><i>Current:</i> A boat ramp where transit users are dropped off allows visitors to touch the lake if desired. The existing day use area consists of picnic tables on a knoll with views of the Alaska Range, but it sees little use.</p> <p>A previously approved boardwalk at the southern end of Wonder Lake will be installed in 2019 and 2020. It will replace informal trails along the lakeshore and improve the quality of the experience for campers and transit bus passengers on their Wonder Lake stop. The boardwalk will start where visitors are let off the bus on the south end of the lake and head east for 300 feet. It will be as low-profile as possible, wide enough to accommodate bus passengers, and include bump-outs for passing and photography. It could offer an area for fishing or have signage to direct visitors to where fishing is appropriate. It will be designed to dissuade visitors from continuing up the shore of the lake on informal trails.</p>	<p><i>Desired:</i> NPS provides a more valuable day use experience separate from the campground. A new Day Use Area could be focused at the south end of Wonder Lake and include picnic tables, boardwalk, interpretive signage, and above-ground toilets. Additional dirt work and a picnic shelter could also be included.</p> <p>Toilets need to be above ground due to the high water table. They should be more aesthetically pleasing than temporary units.</p> <p>Interpretative signage could include the administrative history of the area. An obvious place to view the mountain could be provided, so that day users don't disrupt campers. This could be a viewing location off of the existing amphitheater. The mountain is not visible from the proposed Day Use Area at the shore of Wonder Lake.</p> <p>The existing day use area could be repurposed or rehabilitated.</p>

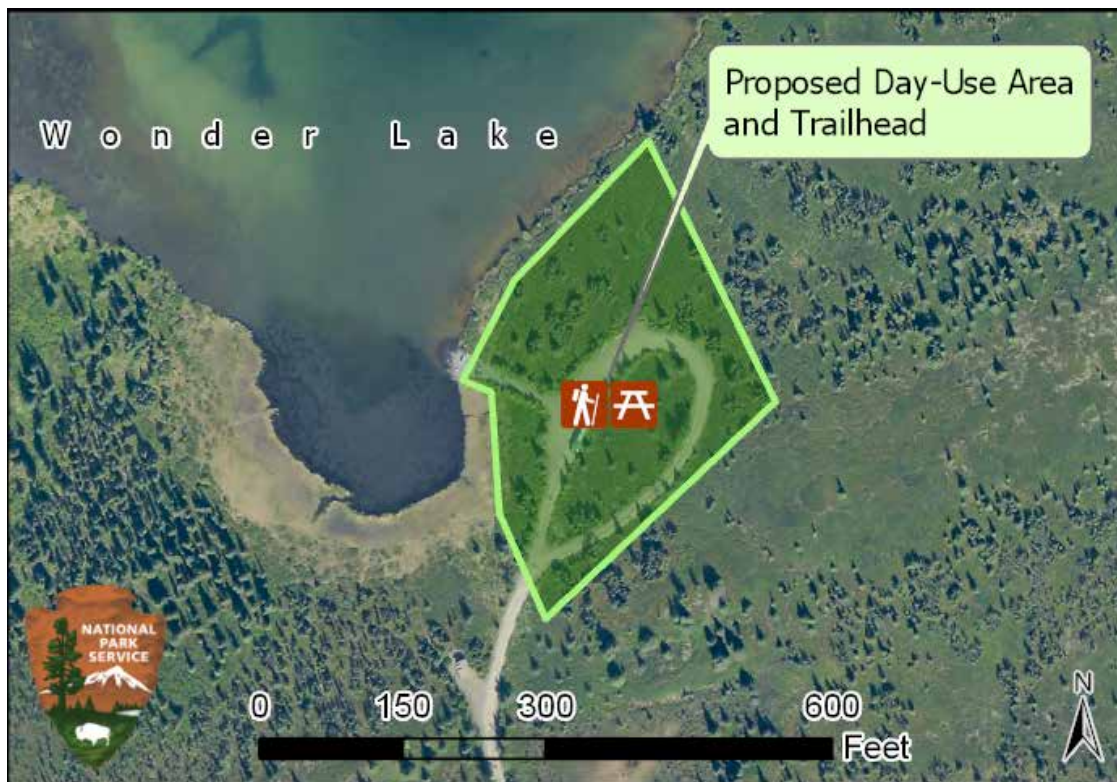


Figure 7. Approximate location of potential Wonder Lake day use area on the south end of Wonder Lake.

Table 3. Trails under consideration in range of potential recreation infrastructure.

Trail Name	Estimated Length (miles)	Trail Class ⁶
Anderson Trail	0.25	4
Blueberry Hill	0.49	2
Brooker Loop	10	2
Camp Ridge Trail	5.5	2
Cloudberry Loop	2	2
Cranberry Ridge	1	2
Ditchline Trail/ Cloudberry trail to Willow Creek	0.5	2
Ditchline Trail/Willow Creek to Kantishna Airstrip	3.5	4
Eagle's Nest Trail	2	2
McKinley Bar Trail	2.5	2
McKinley Bar Spurs	0.5	3
Quigley Cabin Trail	0.12	4
Reflection Pond Trail	.5	2
Ridge Walkabout	3	2
Summer Trail/ East side Wonder Lake	3	2
Summer Trail/ Wonder Lake Backcountry Trail	1	3
Taiga Trail (West)	1.5	2
Taylor Loop	15	2 and 3
Washburn Loop	2	2
Wickersham Loop	4	2
Estimated Total	57.87	-

⁶ See Appendix A for trail class descriptions.

The maximum formal trail system proposal includes up to 80 miles of existing and new trail. Trails would be built in accordance with the Denali Trail Standards as approved in the 2019–2026 *Denali Trail Management Plan*. A Minimum Requirement Analysis (MRA) is required to determine construction, maintenance, and signage methods where management actions and trail construction may impact designated and eligible wilderness. New trail

construction and trail upgrades would comply with the Architectural Barriers Act (ABA).

Trail lengths noted in Table 3 are estimated based on existing alignments. Some trails would need to be significantly rerouted and may result in additional trail mileage. These numbers will be refined once scouting, route flagging, and field surveys have been completed.

Recreation Infrastructure:	Anderson Trail
Primary User	Primary User
<i>Current:</i> Guided day users	<i>Desired:</i> Independent and guided day users
Visitor Experience	Visitor Experience
<i>Current:</i> Also known as the Lake Creek Trail, the Anderson Trail is an existing informal trail. The 1997 <i>Frontcountry Plan</i> recommended formalizing the trail to improve the experience for hikers going from the designated parking area (Boundary Pit, with SST) to the Wonder Lake causeway.	<i>Desired:</i> This trail could address safety concerns and improve visitor experience along the Wonder Lake by providing a pedestrian walkway and connecting hikers to the Blueberry Hill trail.
Development Components	Development Components
<i>Current:</i> The historic Anderson Homestead site is currently used as a day use destination by Kantishna Experience tours, and previously served as a backpacker campground. Pit toilets remain but are not in service.	<p><i>Desired:</i> New construction of a Class 4⁷ trail would be highly accessible for all visitors and could parallel or cross Lake Creek to provide a nature trail experience.</p> <p>Pit toilets could be removed. A loop trail that addresses resource damage and provides a sustainable location for fishing at the north end of Wonder Lake could also be incorporated.</p> <p>Trail work along the Wonder Lake Causeway could be coordinated with road work and flood mitigation planning.</p>

⁷ See Appendix A for trail class descriptions.

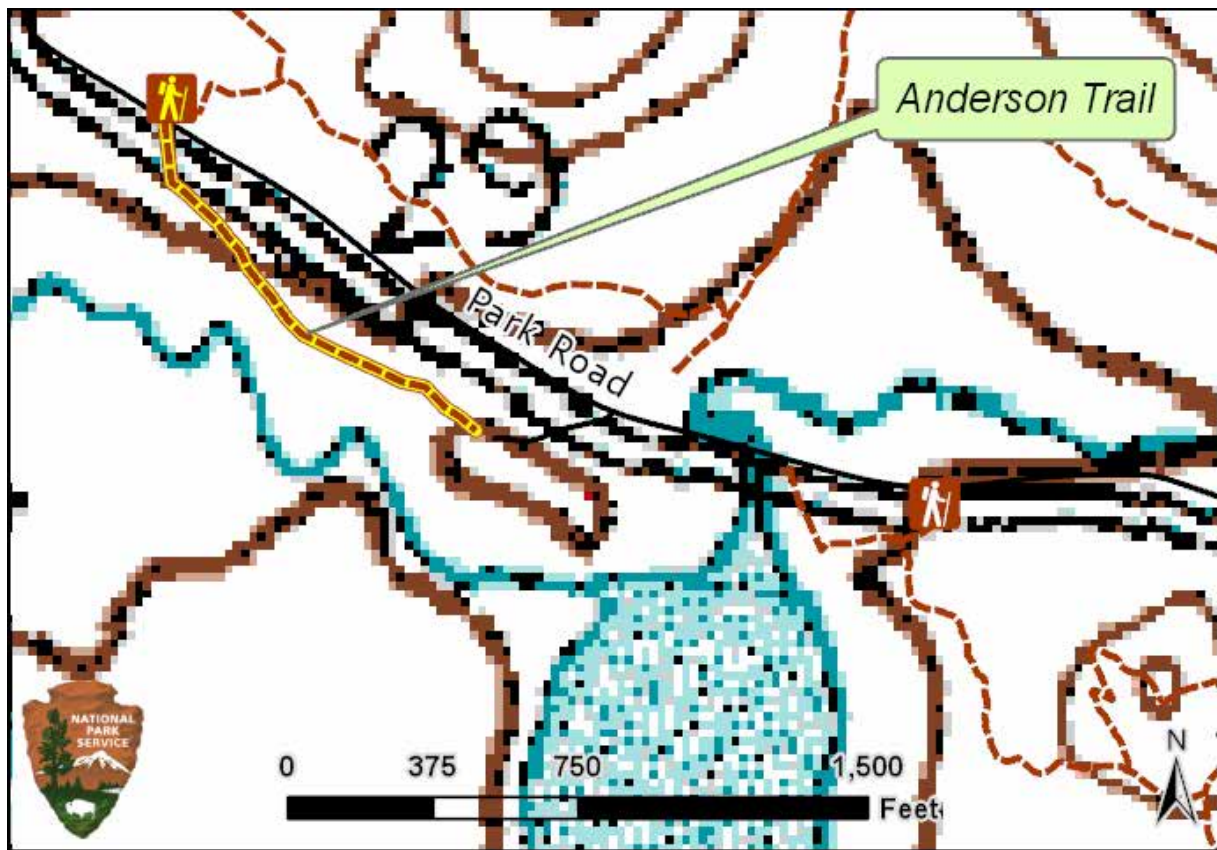


Figure 8. Anderson Trail and trailhead (conceptual).

Recreation Infrastructure:	Blueberry Hill
Primary User	Primary User
<i>Current:</i> Independent and guided day use	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> This is a currently formal trail near the Wonder Lake Ranger Station, but is not advertised by the NPS. It has views of Wonder Lake and the Alaska Range, and it is frequently used by guided groups.	<i>Desired:</i> This would continue to be a short hike option with incredible views. The trail could be connected with the Summer Route and Anderson Trail to provide a longer hike on the west side of the Park Road.
Development Components	Development Components
<i>Current:</i> A maintained trail leads up a small slope to a local high point with views of Wonder Lake and the Alaska Range.	<i>Desired:</i> The trail would connect with the Summer Route and Ditchline Trails to provide a continuous hiking trail from Wonder Lake to Kantishna.

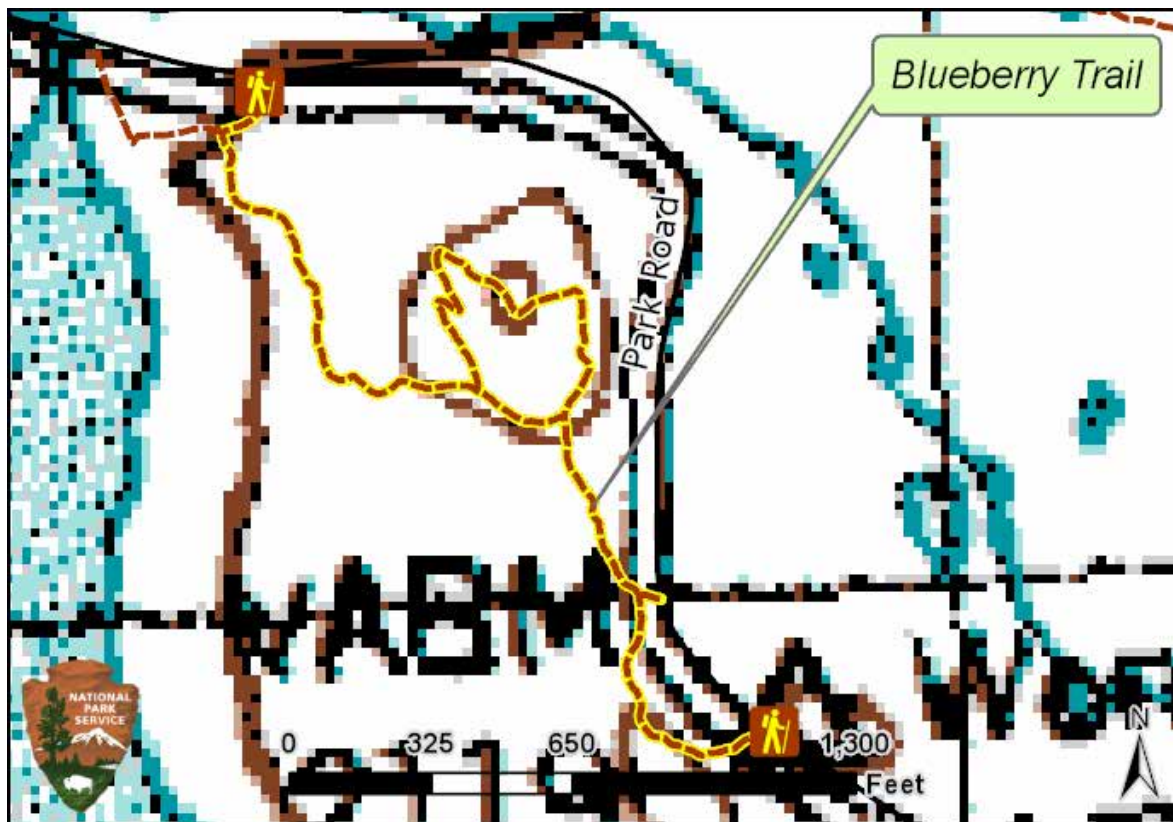


Figure 9. Blueberry Trail (existing) and trailheads (conceptual).

Recreation Infrastructure:	Brooker Loop
Primary User	Primary User
<i>Current:</i> Independent day and overnight use	<i>Desired:</i> Independent and guided day or overnight use
Visitor Experience	Visitor Experience
<i>Current:</i> This old mining route is partially within eligible wilderness, passes an active gold placer mining site, multiple historic mining resources, and offers stunning views of the Alaska Range.	<p><i>Desired:</i> Interpretive potential on this trail includes the Comstock Cabin, active mining operation, and the Alpha Mine site.</p> <p>An MRA should be completed with an Extent Necessary Determination or capacity discussion to determine commercial use on the trail.</p>
Development Components	Development Components
<i>Current:</i> The Eldorado Creek access route has been recently improved as far as the active mining claims located 2.5 miles in and is functional as far as the mouth of Slate Creek another half mile upstream. The tractor trail to the Brooker Mountain airstrip is largely overgrown and poorly aligned through soft ground.	<p><i>Desired:</i> Length: 10 miles; Class: 2.</p> <p><i>Backcountry Campsites:</i> Up to two backcountry campsites with spectacular views of the Alaska Range could be constructed on this loop.</p> <p><i>Eligible wilderness:</i> This trail would have approximately 6 miles of trail within eligible wilderness. If the trail is built the route could be minimally marked, but construction would lessen impacts from continued use in areas of wet tundra. An MRA is needed to determine the best method for construction and maintenance within eligible wilderness.</p> <p><i>Construction methods:</i> This proposed 10-mile trail is a Class 2 trail that would be constructed along a historic mining route on Eldorado Creek, and on Brooker Mountain and Alpha Ridge. Mechanized construction techniques would be used to harden the tread and provide for drainage. The rustic boardwalk would be installed across poor soils between the airstrip and the durable ground on Brooker Mountain. The tractor trail between Brooker Mountain and the Alpha Ridge mine site could be utilized in its existing condition or improved with route markers. Heavy construction would be needed to harden the route along the dozer trail between the Alpha Ridge mine site and Eldorado Creek. Hand crews could install structures to harden the route, or a mechanized crew could construct a trail along a sustainable alignment. A trail as far as the Brooker Mountain summit could be constructed to allow for dispersed hiking along Alpha Ridge and dispersed hiking along the descent to Eldorado Creek or Moose Creek. A bridge or hand tram would be needed to cross Moose Creek from the Park Road. Trail construction within the Eldorado Creek floodplain may not be possible, and visitors may need to walk up the Eldorado access route.</p>

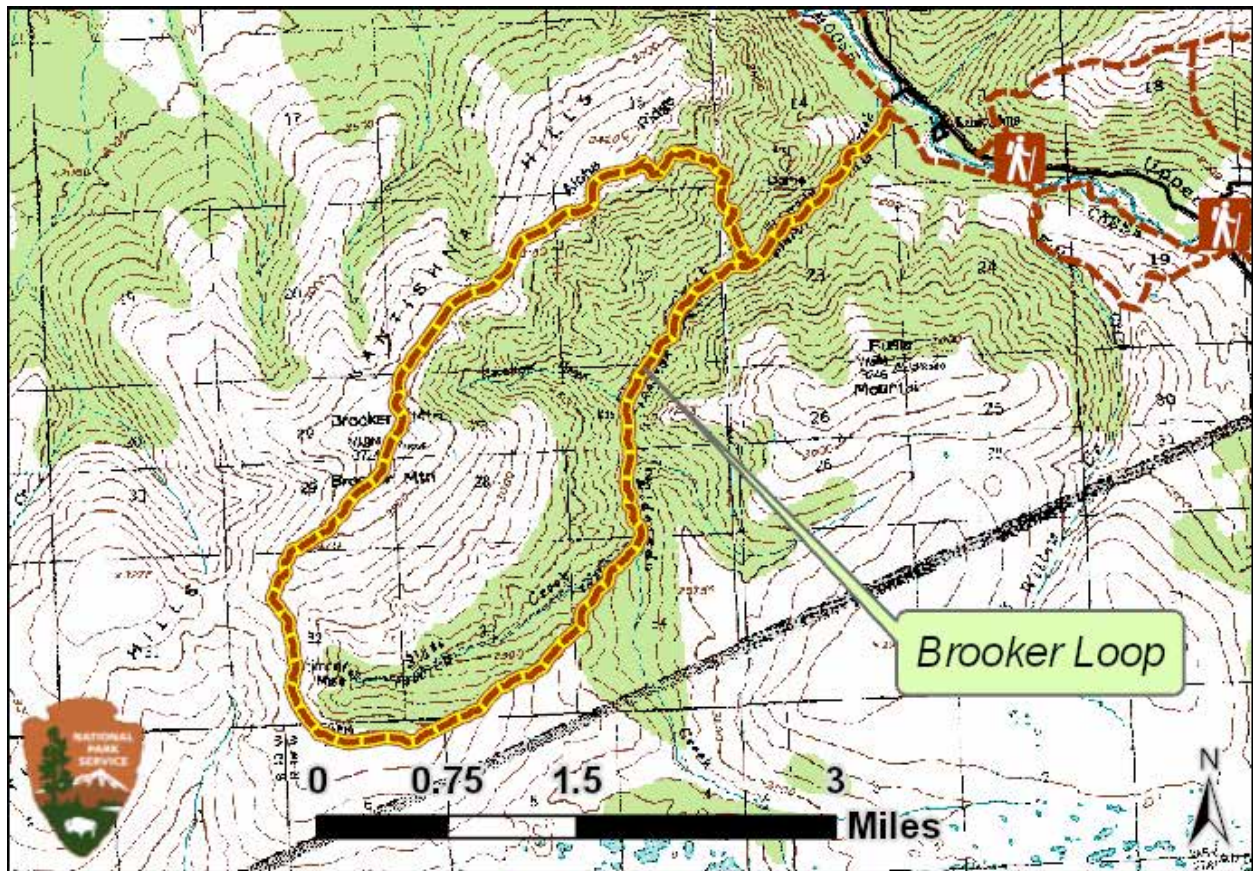


Figure 10. Brooker Loop (conceptual).

Recreation Infrastructure:	Camp Ridge Trail
Primary User	Primary User
<i>Current:</i> Independent and guided day use	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> The trail provides excellent views of Denali, the Alaska Range, and Wonder Lake.	<i>Desired:</i> This trail offers easy access to appealing alpine hiking, and provides excellent views of Denali, the Alaska Range, and Wonder Lake. It could be an up-and-back hike, or part of a longer day hike incorporating Skyline Drive or the Wickersham Loop.
Development Components	Development Components
<p><i>Current:</i> The existing trailhead near Kantishna Roadhouse is along a narrow section of the Park Road that would be difficult to develop and integrate into a transportation system or network of other proposed trails. The terrain along Camp Ridge is the most suitable in the Moose Creek Valley for trail construction and maintenance, and this alignment would provide the most sustainable route to reach the alpine terrain of the Kantishna Hills.</p> <p>Camp Denali uses the upper segments of the informal trail to access their inholding at the eastern end of the ridge. They mark and maintain three trails that descend the ridge to Camp Denali property including the Ridge Walkabout and Eagle's Nest Trail.</p>	<p><i>Desired:</i> The informal trail that ascends Camp Ridge from near the Kantishna Roadhouse would be improved to Class 2 condition. The western $\frac{3}{4}$ mile of the trail that climbs from the Kantishna Roadhouse would need to be stabilized and rerouted to avoid poor soils and take advantage of improved views. A significant reroute would be needed to avoid any geo-hazard concerns. Any existing pull-out for vehicles would be a mile from the current trail start.</p> <p>Nearly the entire length of the rest of the trail is above tree line and is already in maintainable condition. The trail would be rerouted to avoid private property at the eastern end of the ridge. A connection to Skyline Drive Access Route could be constructed, but would likely require some sections of boardwalk.</p>

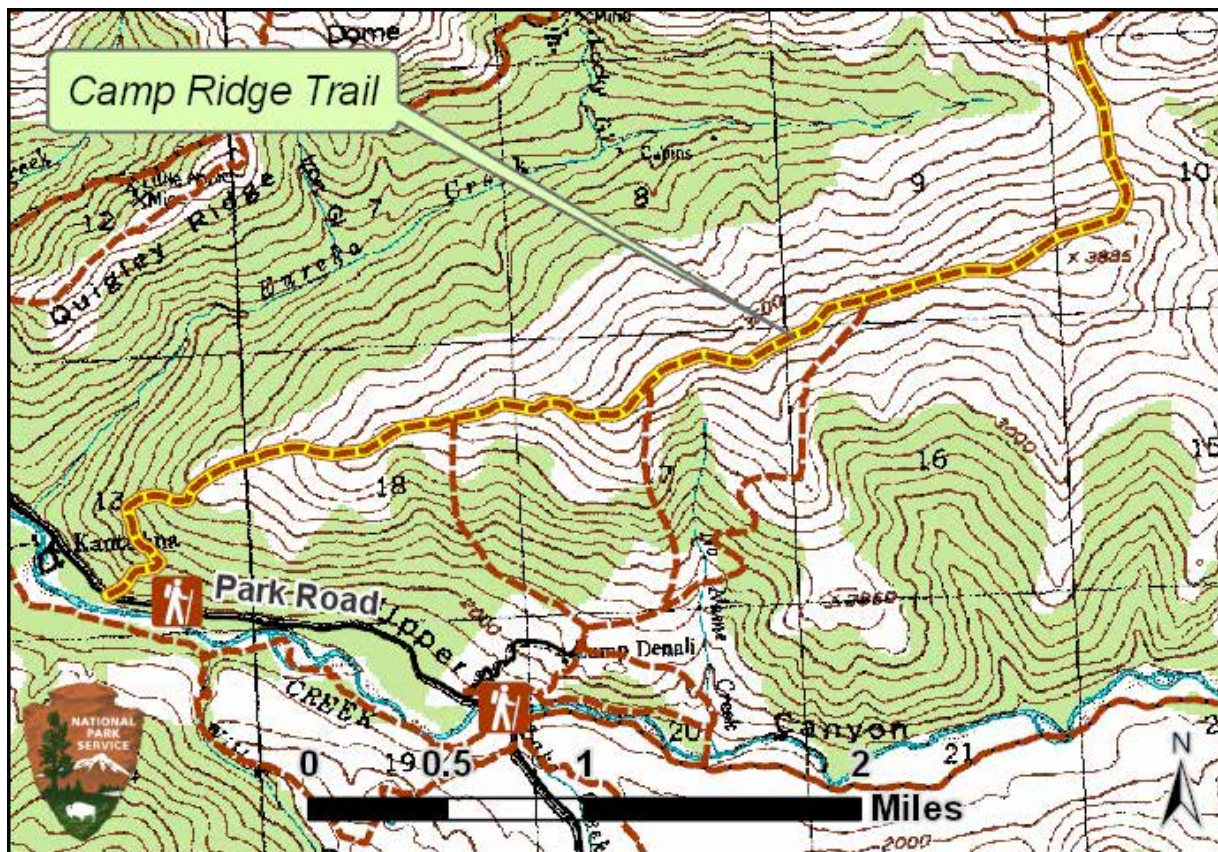


Figure 11. Camp Ridge trail (conceptual).

Recreation Infrastructure:	Cloudberry Trail
Primary User	Primary User
<i>Current:</i> Independent and guided day use	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> This trail is primarily used for guided hiking.	<i>Desired:</i> The visitor experience would be improved as a sustainable alpine loop trail constructed in the Moose Creek Valley. An interpretive opportunity exists as the trail would cross and parallel the routing of the historic ditchline/pipeline that powered hydraulic placer mining in the Moose Creek Valley with water from Wonder Lake.
Development Components	Development Components
<i>Current:</i> The Cloudberry Trail is a well-used there-and-back informal trail and dead ends at the designated wilderness boundary.	<p><i>Desired:</i> A Class 2 alpine trail would be constructed between the Moose Creek Bridge and old mining routes along the west side of Moose Creek.</p> <p>The existing informal Cloudberry Trail would be improved to the point where it reaches the alpine terrain on the ridge between Lake Creek and Willow Creek. A new trail would be constructed on the durable ground on the ridgeline as it descends to the mouth of Willow Creek, where it would connect with the Ditchline Trail, the proposed connection trail between Kantishna and Wonder Lake.</p> <p>The existing informal trail that leads to the designated wilderness boundary would be closed and rehabilitated.</p>

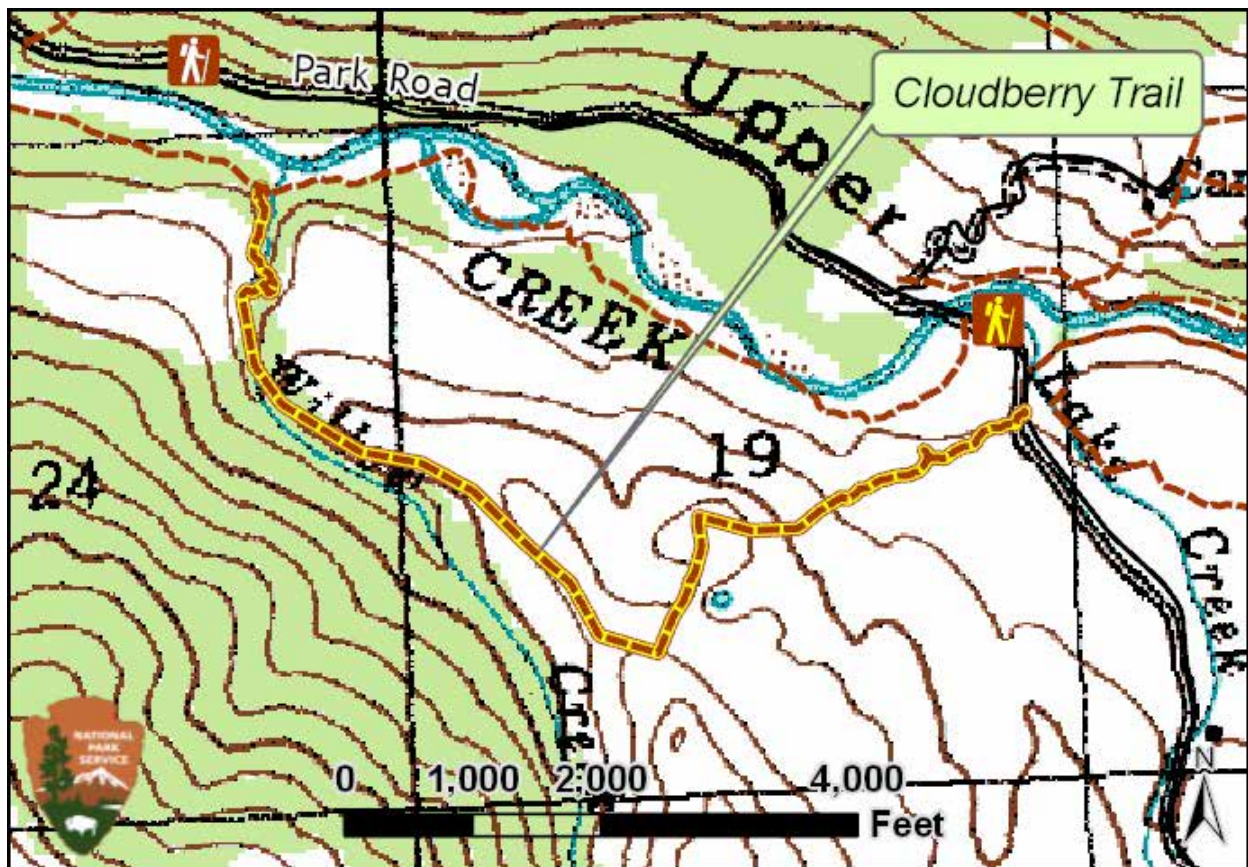


Figure 12. Cloudberry Trail and trailhead (conceptual).

Recreation Infrastructure:	Cranberry Ridge Trail
Primary User	Primary User
<i>Current:</i> Independent and guided day use primarily by lodge guests	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> The trail originates on Camp Denali property and offers an easy hike to a ridge with views of the Moose Creek Valley.	<i>Desired:</i> This trail would connect to the rest of the trail system offering the hiking opportunity to all visitors.
Development Components	Development Components
<p><i>Current:</i> The trail radiation from Camp Denali would best be classified as Class 2 trails. As is typical of informal trail development, none of the trails meet NPS standards for design sustainability or construction. The trails were developed on BLM lands before they were added to the park under ANILCA in 1980, and some of the trails are used to access private inholdings.</p> <p>The trails have mostly been “walked in” over many years of use, and some improvements have been made to create a durable tread surface and to minimize erosion, so that the impact has largely been contained to a single tread along all routes. Some drainage ditches have been dug, running plank laid down, and rock and timber water bars installed. Camp Denali has installed signs where the routes intersect. Some of the trails traverse the slopes at controlled grades, but no tread construction has been done.</p> <p>In some instances, the tread remains above the root mat, which greatly reduces erosion and minimizes ground movement, although it doesn't provide a uniform walking surface. In the steeper terrain above treeline, the routes mostly go straight up the fall line, avoid heavy vegetation and climb mostly on rocky and gravelly terrain.</p> <p>Because the routes are so steep, erosion is evident even when on durable soils. Lower on the hill side, where the tread has cut through the vegetation and organic layer and the ground is more saturated, deep ruts have formed. Where running plank has been installed, it has been effective at stabilizing the tread and minimizing the braiding. Many of these planks are in poor condition and some repairs have been made, but they largely are due for replacement.</p>	<p><i>Desired:</i> If the routes are to be retained, ongoing maintenance to stabilize the tread and control erosion may be necessary. Given the elevation needed to gain the ridgeline and unstable terrain off of the rocky ridgelines, rerouting doesn't seem immediately practicable. The trails are almost exclusively used by Camp Denali, which limits use. If use of the trails were to increase, erosion would likely increase, as well. If heavy rain events of recent years become the norm, more work to stabilize the tread and manage high volume rains may be necessary.</p> <p>It may be prudent to concentrate use on the most stable trails and focus maintenance efforts there (maybe Western Ridge Walkabout and Eagle's Nest, Upper Cranberry). Trails that have eroded beyond repair or have destabilized the surrounding landform may best be left to recover naturally or be actively revegetated (maybe Middle Ridge Walkabout, Eastern Ridge Walkabout, and Lower Cranberry).</p>

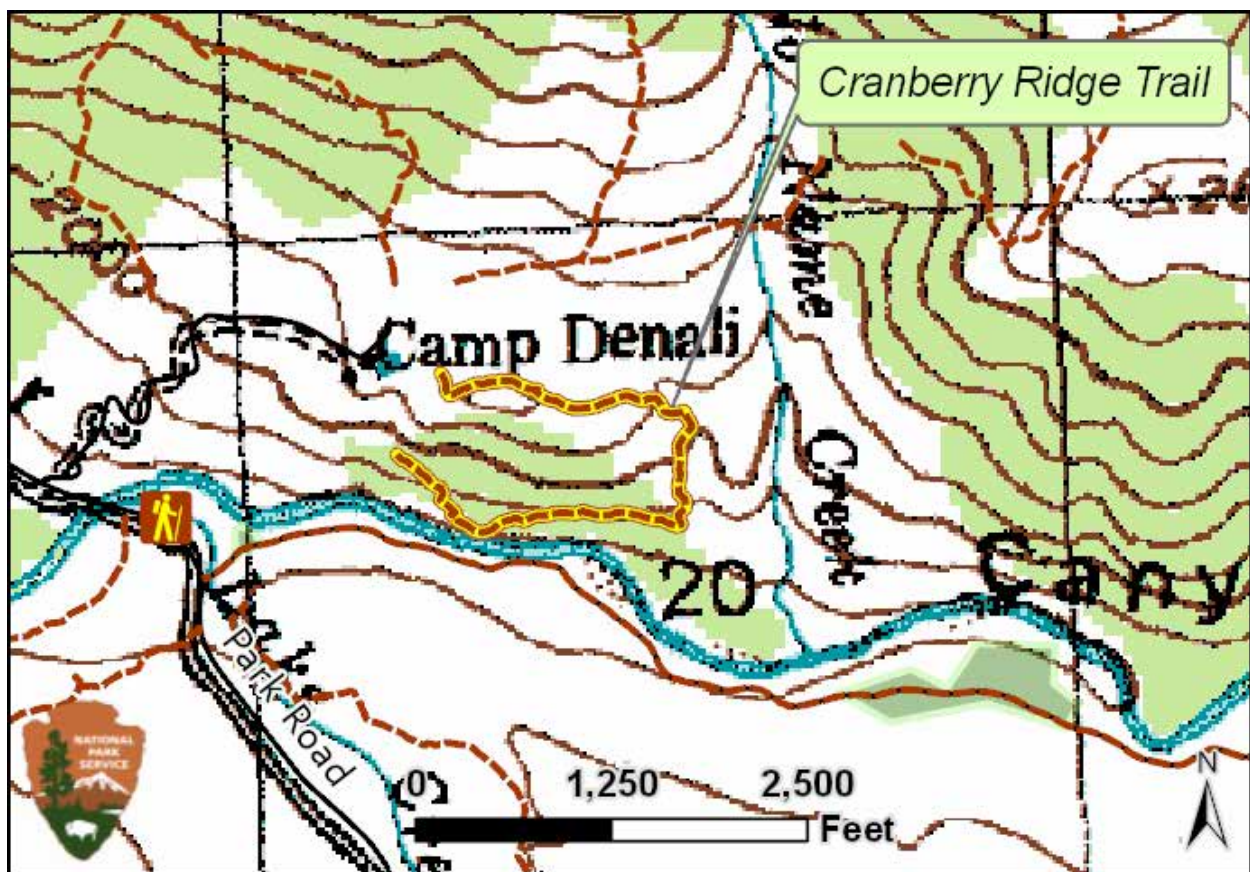


Figure 13. Cranberry Ridge Trail (existing).

Recreation Infrastructure:	Ditchline Trail
Primary User	Primary User
<i>Current:</i> No use currently exists.	<i>Desired:</i> Independent and guided day use, families and bicycles if bridges are in place
Visitor Experience	Visitor Experience
<i>Current:</i> No use currently exists.	<i>Desired:</i> This trail would provide access to the Brooker Loop, Busia homestead, and would be constructed along the historic alignment of the Ditchline Trail. The trail would cross and parallel the routing of the historic ditchline/pipeline that powered hydraulic placer mining in the Moose Creek Valley with water from Wonder Lake. The trail would connect public and private visitor facilities in the Moose Creek Valley, allowing for visitor connections all the way to Wonder Lake Campground. This trail could be constructed to allow for bicycles, and wheelchair use. If bicycles are allowed, it would provide an opportunity for Kantishna visitors to make a loop with Park Road. To avoid using the Park Road as part of a bike loop, a bike-friendly bridge could be considered on the southern end of the trail.
Development Components	Development Components
<i>Current:</i> No use currently exists.	<p><i>Desired:</i> A class 4 barrier-free hiking trail or multi-use trail would be constructed along the south banks of Moose Creek from the Moose Creek Bridge to the Kantishna Airstrip. Abandoned mining routes exist in the floodplain, and mine tailings are found along Moose Creek as far Willow Creek. Building east from Willow Creek would require new construction along the creek and gaining the terrace above Moose Creek. An informal trail exists along the river terrace west from the Moose Creek Bridge towards Willow Creek. Crossing Moose Creek near the airstrip would require a bridge or hand-powered tram.</p> <p>Denali Backcountry Lodge has a small suspension bridge on private property, and a hand-powered tram near the Kantishna Roadhouse existed during the mining boom. A hand-tram could be constructed on the northern end of the trail for pedestrians connecting near the airstrip.</p>

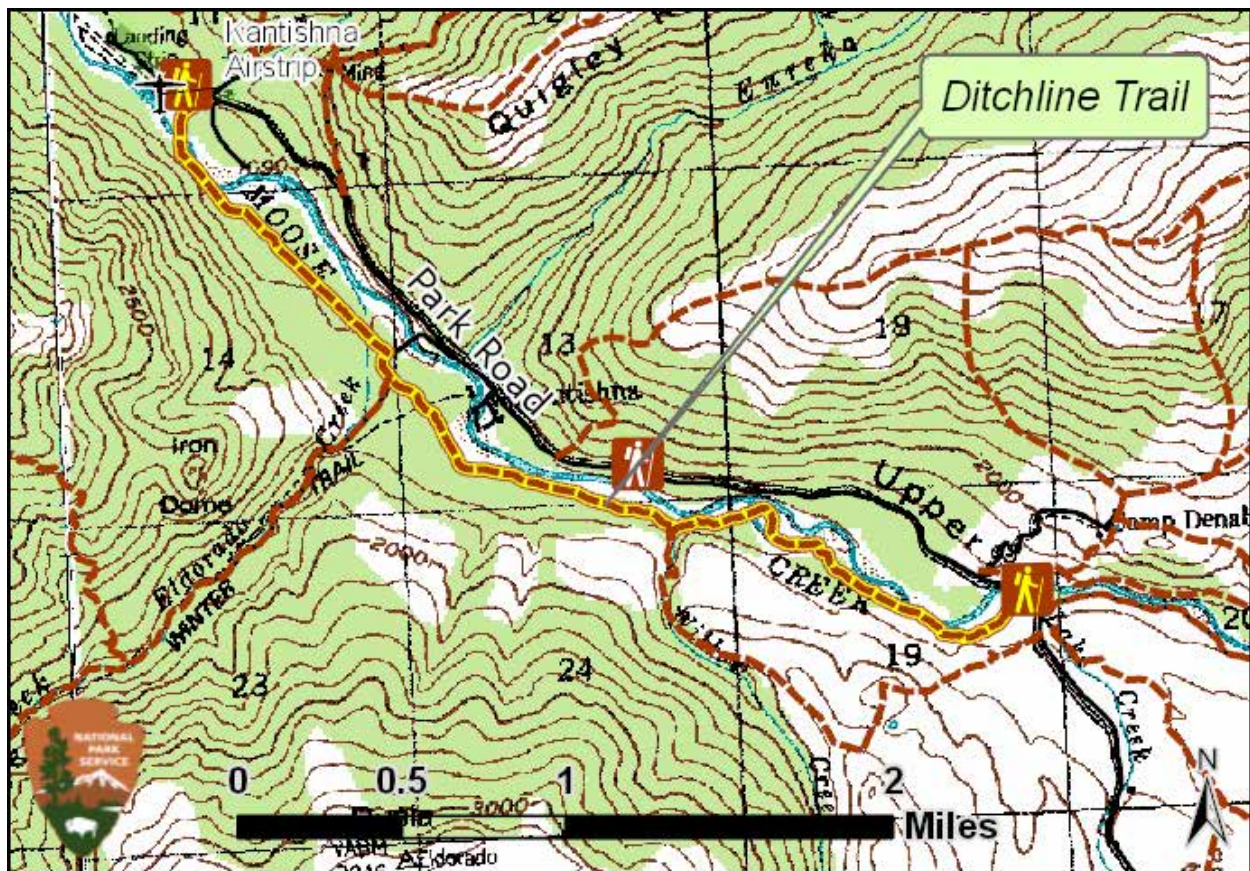


Figure 14. Ditchline Trail and trailheads (conceptual).

Recreation Infrastructure:	Eagle's Nest Trail
Primary User	Primary User
<i>Current:</i> Independent and guided day use primarily by lodge guests	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> The trail originates on Camp Denali property and offers a rigorous hike up to Camp Ridge.	<i>Desired:</i> This trail would primarily continue to serve Camp Denali's guest and inholder access to Camp Ridge.
Development Components	Development Components
<p><i>Current:</i> The trail radiation from Camp Denali would best be classified as Class 2 trails. As is typical of informal trail development, none of the trails meet NPS standards for design sustainability or construction. The trails were developed on BLM lands before they were added to the park under ANILCA in 1980, and some of the trails are used to access private inholdings. The trails have mostly been "walked in" over many years of use, and some improvements have been made to create a durable tread surface and to minimize erosion so that the impact has largely been contained to a single tread along all routes.</p> <p>Some drainage ditches have been dug, running plank laid down, and rock and timber water bars installed. Camp Denali has installed signs where the routes intersect. Some of the trails traverse the slopes at controlled grades, but no tread construction has been done. In some instances, the tread remains above the root mat, which greatly reduces erosion and minimizes ground movement, although it doesn't provide a uniform walking surface. In the steeper terrain above treeline, the routes mostly go straight up the fall line, avoid heavy vegetation and climb mostly on rocky and gravelly terrain.</p> <p>Because the routes are so steep, erosion is evident even when on durable soils. Lower on the hill side, where the tread has cut through the vegetation and organic layer and the ground is more saturated, deep ruts have formed. Where running plank has been installed, it has been effective at stabilizing the tread and minimizing the braiding. Many of these planks are in poor condition and some repairs have been made, but they largely are due for replacement.</p>	<p><i>Desired:</i> If the routes are to be retained, ongoing maintenance to stabilize the tread and control erosion may be necessary. Given the elevation needed to gain the ridgeline and unstable terrain off of the rocky ridgelines, rerouting doesn't seem immediately practicable. The trails are almost exclusively used by Camp Denali, which limits use. If use of the trails were to increase, erosion would likely increase, as well. If heavy rain events of recent years become the norm, more work to stabilize the tread and manage high volume rains may be necessary.</p> <p>It may be prudent to concentrate use on the most stable trails and focus maintenance efforts there (maybe Western Ridge Walkabout and Eagle's Nest, Upper Cranberry). Trails that have eroded beyond repair or have destabilized the surrounding landform may best be left to recover naturally or be actively revegetated (maybe Middle Ridge Walkabout, Eastern Ridge Walkabout, and Lower Cranberry).</p>

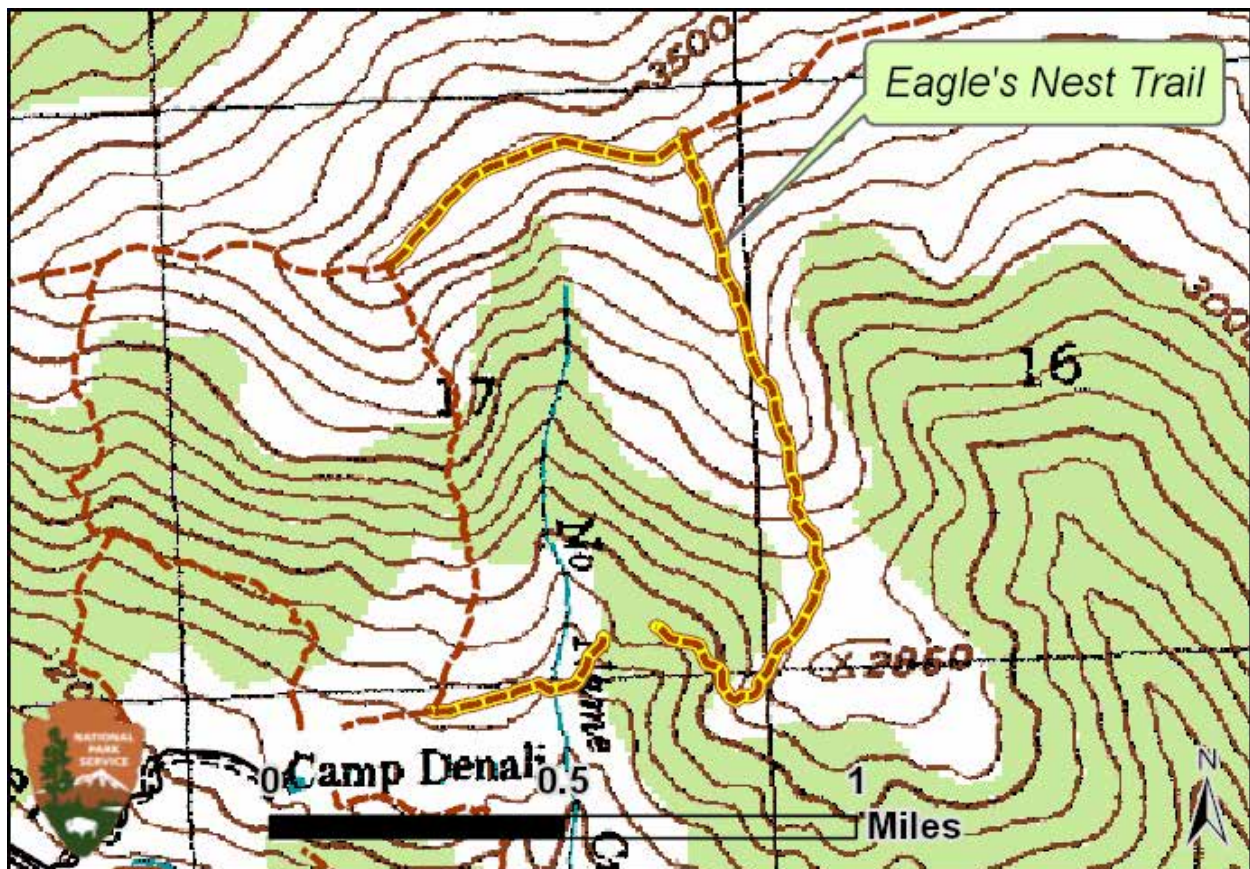


Figure 15. Eagle's Nest Trail (existing).

Recreation Infrastructure:	McKinley Bar Trail
Primary User	Primary User
<i>Current:</i> Independent and guided day use	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> The trail currently serves both campground users and a high amount of commercial use. The trail has views of the range, the Big Timber, ⁸ and the McKinley River Bar.	<i>Desired:</i> The durable McKinley Bar is the final destination, and visitors are encouraged to explore their wilderness on sustainable ground. A MRA should be completed with an Extent Necessary Determination or capacity discussion to determine commercial use on the trail.
Development Components	Development Components
<i>Current:</i> This is an existing 2.5-mile formal trail located within designated Denali Wilderness and is easy walking. The trail leads to the McKinley River gravel bar. In recent years the river channels have jumped, and a deep channel has eroded the end of the trail creating an abrupt end for visitors. Informal trails have started to form going up and down the river from this location.	<i>Desired:</i> The trail could be modified with a temporary bridge to provide access to the gravel bar over the eroding the existing trail. Alternatively, the more desirable informal trails could be brushed out to a location where channels of the river are easier to cross, and the river bar is accessible. Another option is to create a final destination at the end of the existing trail with a constructed overlook of the river bar.

⁸ Not a formal name but has long history as a place name.

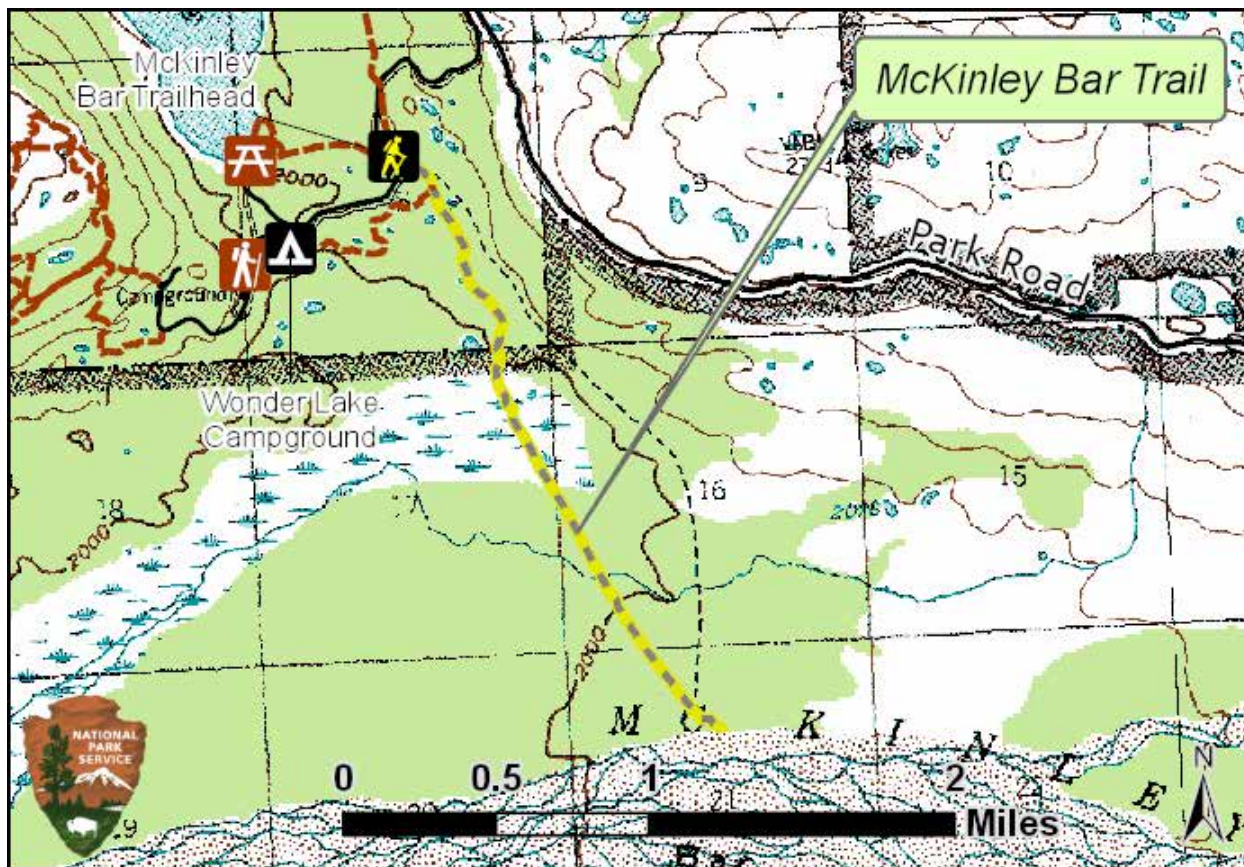


Figure 16. McKinley Bar Trail and trailhead (existing).

Recreation Infrastructure:	McKinley Bar Spurs
Primary User	Primary User
<i>Current:</i> Independent day use	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> Hikers who want to access the McKinley Bar Trail must either hike along the campground access road or along a series of informal trails that meander through the tundra in this area. Those that hike the informal trails may not see the wayside or closure information at the trailhead.	<i>Desired:</i> These spur trails would allow campers and day users to access the McKinley Bar Trail through the tundra instead of along the campground access road. Completing both connections would create a sustainable, barrier-free Class 3 loop hike from the Wonder Lake Campground, and also provide shorter hiking opportunities for Wonder Lake transit passengers.
Development Components	Development Components
<i>Current:</i> An informal winter-only trail exists from the campground bus stop towards a viewpoint of the campground access road and the McKinley Bar trailhead.	<i>Desired:</i> Proposed construction of barrier-free Class 3 trails would extend the McKinley Bar/Summer Trails to the Wonder Lake Day Use Area and to the Wonder Lake Campground.

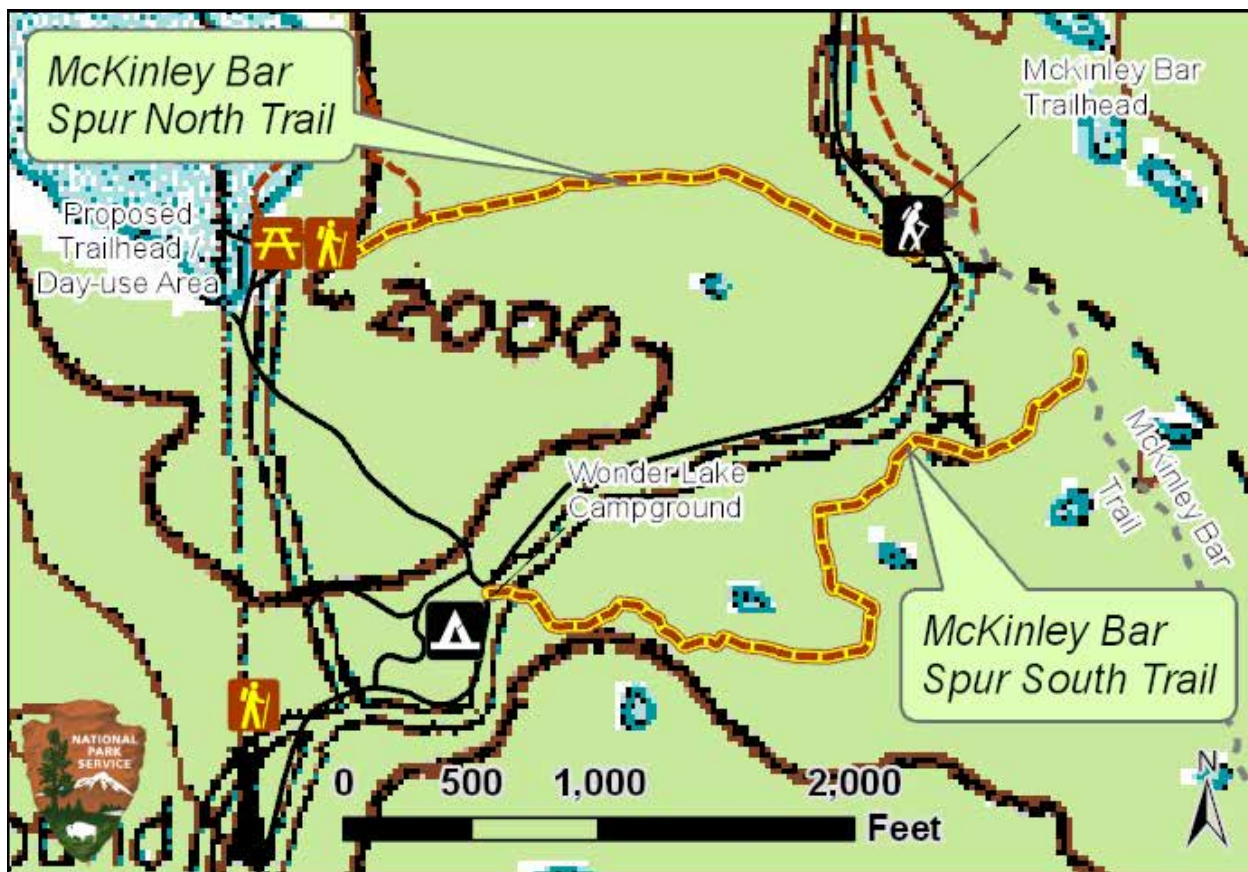


Figure 17. McKinley Bar Spur Trails and trailheads (conceptual).

Recreation Infrastructure:	Reflection Pond (or Ansel Adams) Trail
Primary User	Primary User
<i>Current:</i> Independent and guided day use	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> Stunning views of Denali can be seen reflecting in the roadside pond or off of Wonder Lake from this existing informal trail.	<i>Desired:</i> This is a quick and easy walk with stunning views that intersects with the proposed Summer Route for those who want to spend more time along the Wonder Lake shore.
Development Components	Development Components
<p><i>Current:</i> The trail radiation from Camp Denali would best be classified as Class 2 trails. As is typical of informal trail development, none of the trails meet NPS standards for design sustainability or construction. The trails were developed on BLM lands before they were added to the park under ANILCA in 1980, and some of the trails are used to access private inholdings. The trails have mostly been “walked in” over many years of use, and some improvements have been made to create a durable tread surface and to minimize erosion so that the impact has largely been contained to a single tread along all routes. Some drainage ditches have been dug, running plank laid down, and rock and timber water bars installed.</p> <p>Camp Denali has installed signs where the routes intersect. Some of the trails traverse the slopes at controlled grades, but no tread construction has been done. In some instances, the tread remains above the root mat, which greatly reduces erosion and minimizes ground movement, although it doesn't provide a uniform walking surface. In the steeper terrain above treeline, the routes mostly go straight up the fall line, avoid heavy vegetation and climb mostly on rocky and gravelly terrain.</p> <p>Because the routes are so steep, erosion is evident even when on durable soils. Lower on the hillside, where the tread has cut through the vegetation and organic layer and the ground is more saturated; deep ruts have formed. Where running plank has been installed, it has been effective at stabilizing the tread and minimizing the braiding. Many of these planks are in poor condition and some repairs have been made, but they largely are due for replacement.</p>	<p><i>Desired:</i> If the routes are to be retained, ongoing maintenance to stabilize the tread and control erosion may be necessary. Given the elevation needed to gain the ridgeline and unstable terrain off of the rocky ridgelines, rerouting doesn't seem immediately practicable. The trails are almost exclusively used by Camp Denali, which limits use. If the use of the trails were to increase, erosion would likely increase, as well. If heavy rain events of recent years become the norm, more work to stabilize the tread and manage high volume rains may be necessary.</p> <p>It may be prudent to concentrate use on the most stable trails and focus maintenance efforts there (maybe Western Ridge Walkabout and Eagle's Nest, Upper Cranberry). Trails that have eroded beyond repair or have destabilized the surrounding landform may best be left to recover naturally or be actively revegetated (maybe Middle Ridge Walkabout, Eastern Ridge Walkabout, and Lower Cranberry).</p>

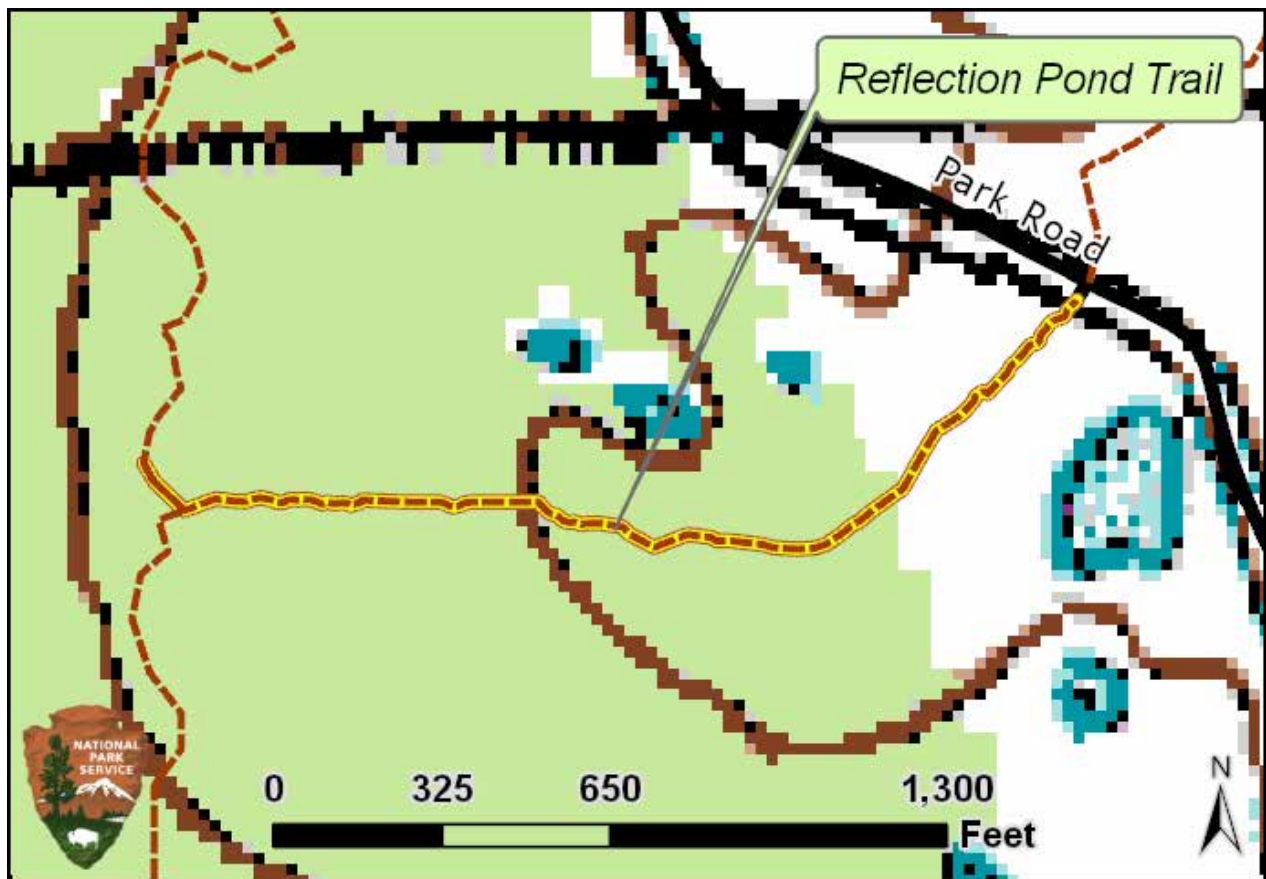


Figure 18. Reflection Pond Trail and trailhead (conceptual).

Recreation Infrastructure:	Summer Route
Primary User	Primary User
<i>Current:</i> Independent users	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> Visitors currently explore the eastern side of the Wonder Lake by a web of informal trails.	<p><i>Desired:</i> This is a proposed class 2 trail that would connect the Wonder Lake Campground and Wonder Lake Ranger Station via a historic “summer route” or “Kantishna route” routing along the east side of Wonder Lake from the McKinley River to Kantishna.⁹</p> <p>The trail could offer an improved visitor experience as it removes visitors from the Park Road and offers stunning view of the lake and range.</p>
Development Components	Development Components
<i>Current:</i> An existing informal trail is located along the rolling hills on the north shore of Wonder Lake and from Reflection Pond to Ansel Adams Point.	<p><i>Desired:</i> The trail could travel along durable ground towards the Wonder Lake Ranger Station from Reflection Pond, but the last 1,000 feet would require boardwalk or having hikers utilize the Park Road. If the historic trail went through Otter Pass or to Moose Creek via Jumbo Creek, it may have crossed the Park Road alignment near Reflection Pond and stayed well north of the Ranger Station on the more durable ground. A cultural resource ground survey could be completed to verify the existence and the alignment of the historic route and its contribution to the cultural landscape.</p>

⁹ Referred to in Sheldon expedition notes from 1906-08. Exact route is not known.

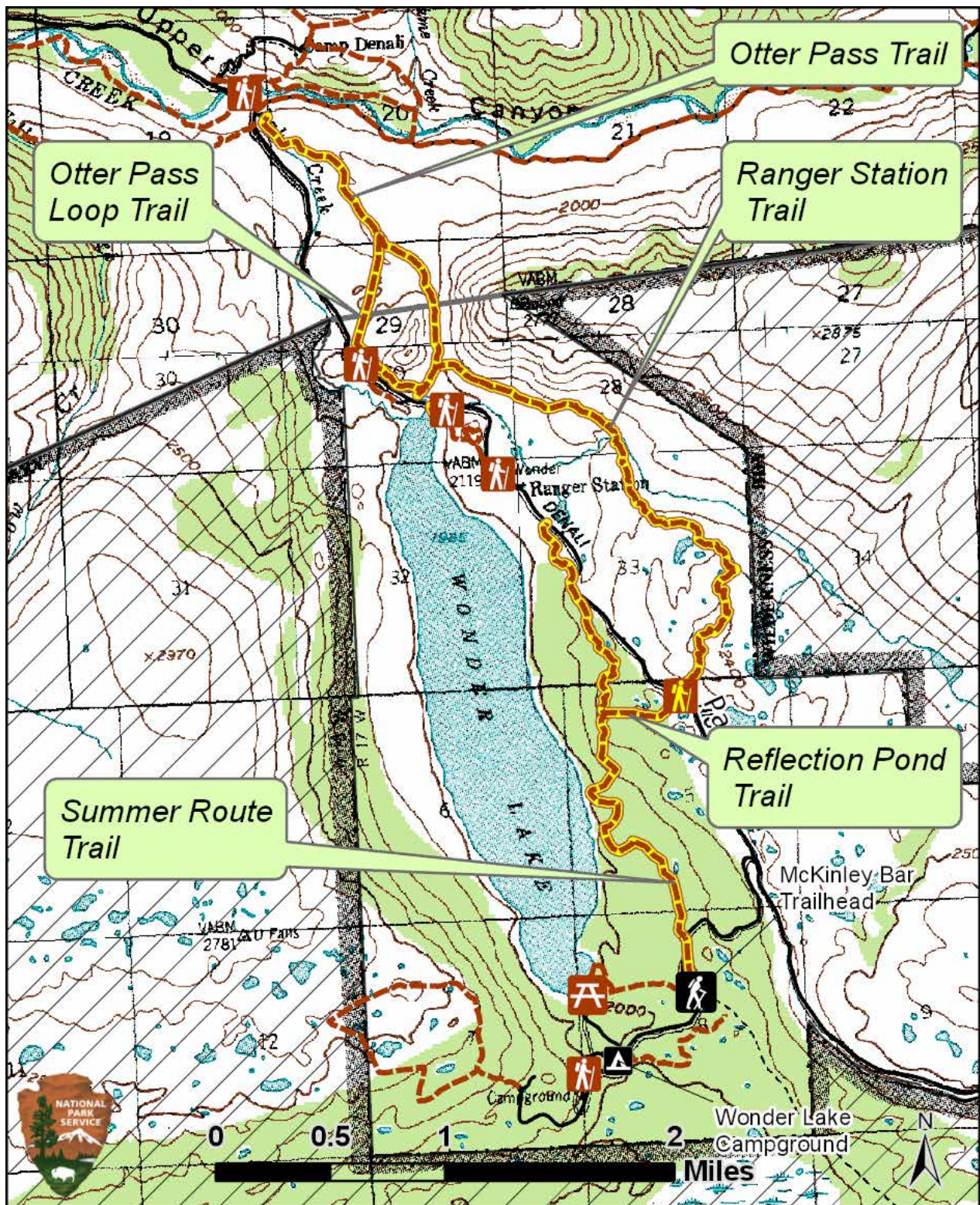


Figure 19. Summer Route(s) and trailheads (conceptual).

Recreation Infrastructure:	Ridge Walkabout
Primary User	Primary User
<i>Current:</i> Independent and guided day use primarily by lodge guests	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> The trail originates on Camp Denali property and offers a rigorous loop hike up to Camp Ridge.	<i>Desired:</i> This trail would primarily continue to serve Camp Denali's guests and inholder access to Camp Ridge.
Development Components	Development Components
<p><i>Current:</i> The trail radiation from Camp Denali would best be classified as Class 2 trails. As is typical of informal trail development, none of the trails meet NPS standards for design sustainability or construction. The trails were developed on BLM lands before they were added to the park under ANILCA in 1980, and some of the trails are used to access private inholdings. The trails have mostly been "walked in" over many years of use, and some improvements have been made to create a durable tread surface and to minimize erosion, so that the impact has largely been contained to a single tread along all routes. Some drainage ditches have been dug, running plank laid down, and rock and timber water bars installed.</p> <p>Camp Denali has installed signs where the routes intersect. Some of the trails traverse the slopes at controlled grades, but no tread construction has been done. In some instances, the tread remains above the root mat, which greatly reduces erosion and minimizes ground movement, although it doesn't provide a uniform walking surface. In the steeper terrain above treeline, the routes mostly go straight up the fall line, avoid heavy vegetation and climb mostly on rocky and gravelly terrain.</p> <p>Because the routes are so steep, erosion is evident even when on durable soils. Lower on the hill side, where the tread has cut through the vegetation and organic layer and the ground is more saturated, deep ruts have formed. Where running plank has been installed, it has been effective at stabilizing the tread and minimizing the braiding. Many of these planks are in poor condition and some repairs have been made, but they largely are due for replacement.</p>	<p><i>Desired:</i> If the routes are to be retained, ongoing maintenance to stabilize the tread and control erosion may be necessary. Given the elevation needed to gain the ridgeline and unstable terrain off of the rocky ridgelines, rerouting doesn't seem immediately practicable. The trails are almost exclusively used by Camp Denali, which limits use. If use of the trails were to increase, erosion would likely increase, as well. If heavy rain events of recent years become the norm, more work to stabilize the tread and manage high volume rains may be necessary.</p> <p>It may be prudent to concentrate use on the most stable trails and focus maintenance efforts there (maybe Western Ridge Walkabout and Eagle's Nest, Upper Cranberry). Trails that have eroded beyond repair or have destabilized the surrounding landform may best be left to recover naturally or be actively revegetated (maybe Middle Ridge Walkabout, Eastern Ridge Walkabout, and Lower Cranberry).</p>

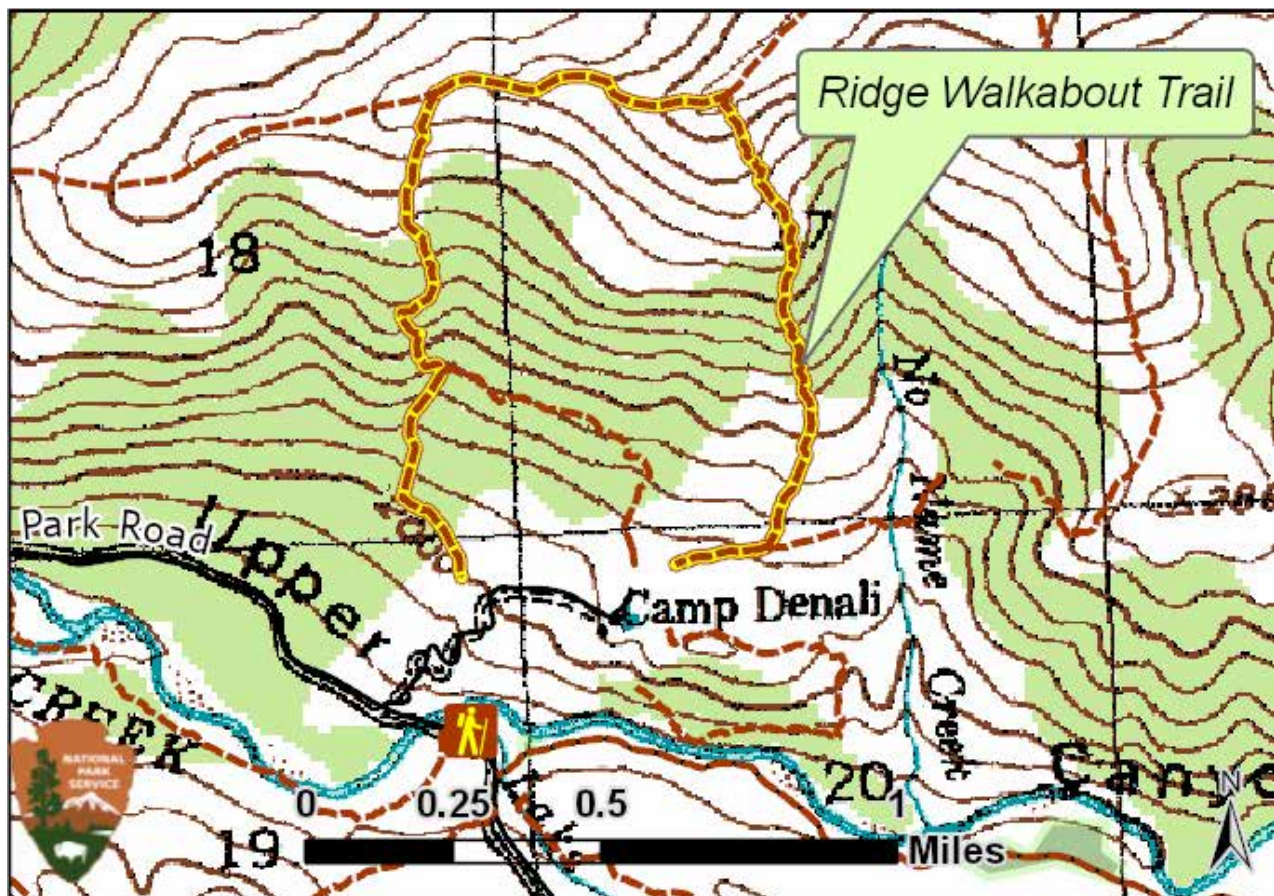


Figure 20. Ridge Walkabout Trail (existing).

Recreation Infrastructure:	Taiga Trail (West)
Primary User	Primary User
<i>Current:</i> Independent and guided day use primarily by lodge guests	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> The trail originates on Camp Denali property and connects with the Ridge Walkabout to create a shorter loop trail experience primarily through forest.	<i>Desired:</i> This trail would primarily continue to serve Camp Denali's guests as a shorter loop hike opportunity.
Development Components	Development Components
<p><i>Current:</i> The trail radiation from Camp Denali would best be classified as Class 2 trails. As is typical of informal trail development, none of the trails meet NPS standards for design sustainability or construction. The trails were developed on BLM lands before they were added to the park under ANILCA in 1980, and some of the trails are used to access private inholdings. The trails have mostly been "walked in" over many years of use, and some improvements have been made to create a durable tread surface and to minimize erosion, so that the impact has largely been contained to a single tread along all routes. Some drainage ditches have been dug, running plank laid down, and rock and timber water bars installed.</p> <p>Camp Denali has installed signs where the routes intersect. Some of the trails traverse the slopes at controlled grades, but no tread construction has been done. In some instances, the tread remains above the root mat, which greatly reduces erosion and minimizes ground movement, although it doesn't provide a uniform walking surface. In the steeper terrain above treeline, the routes mostly go straight up the fall line, avoid heavy vegetation and climb mostly on rocky and gravelly terrain.</p> <p>Because the routes are so steep, erosion is evident even when on durable soils. Lower on the hill side, where the tread has cut through the vegetation and organic layer and the ground is more saturated, deep ruts have formed. Where running plank has been installed, it has been effective at stabilizing the tread and minimizing the braiding. Many of these planks are in poor condition and some repairs have been made, but they largely are due for replacement.</p>	<p><i>Desired:</i> If the routes are to be retained, ongoing maintenance to stabilize the tread and control erosion may be necessary. Given the elevation needed to gain the ridgeline and unstable terrain off of the rocky ridgelines, rerouting doesn't seem immediately practicable. The trails are almost exclusively used by Camp Denali, which limits use. If use of the trails were to increase, erosion would likely increase, as well. If heavy rain events of recent years become the norm, more work to stabilize the tread and manage high volume rains may be necessary.</p> <p>It may be prudent to concentrate use on the most stable trails and focus maintenance efforts there (maybe Western Ridge Walkabout and Eagle's Nest, Upper Cranberry). Trails that have eroded beyond repair or have destabilized the surrounding landform may best be left to recover naturally or be actively revegetated (maybe Middle Ridge Walkabout, Eastern Ridge Walkabout, and Lower Cranberry).</p>

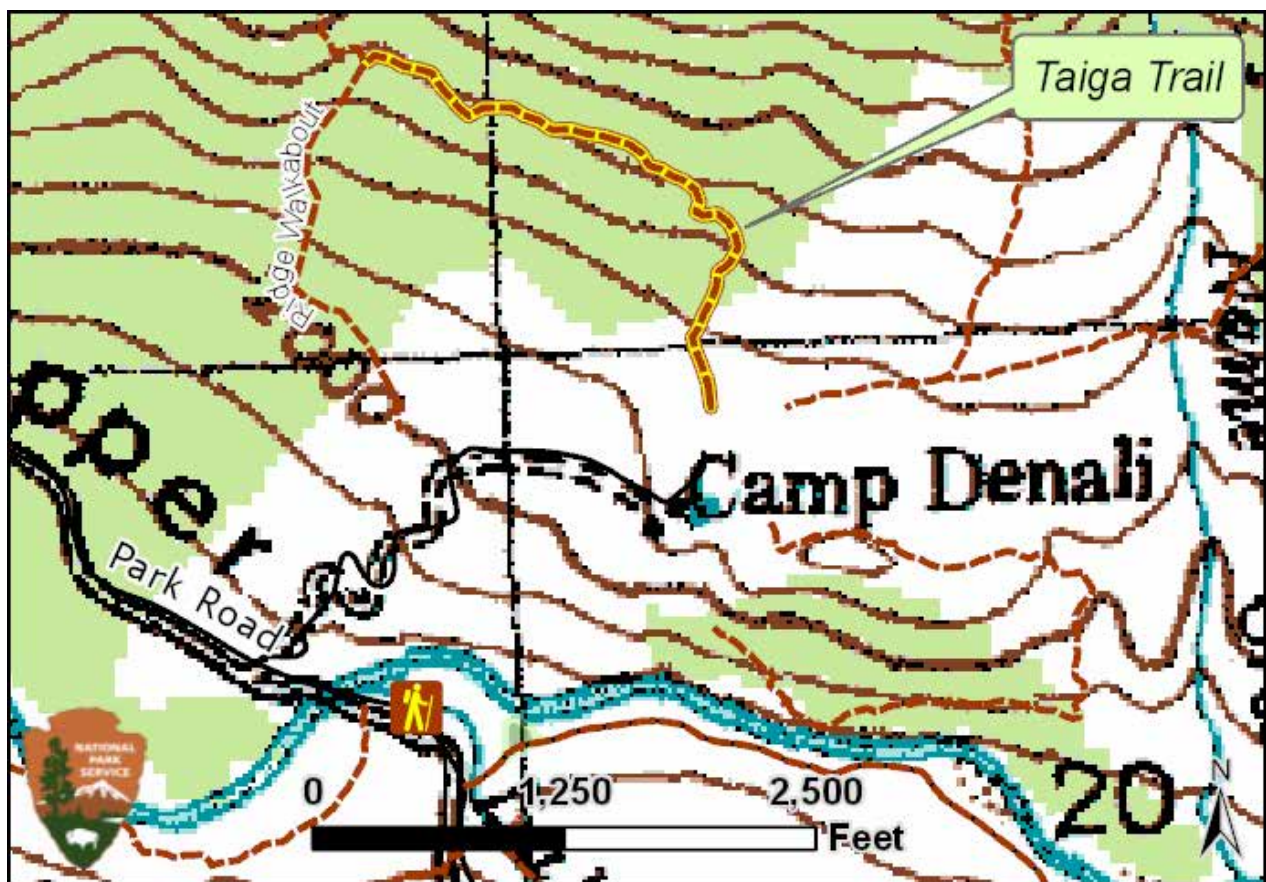


Figure 21. Taiga Trail West (existing).

Recreation Infrastructure:	Taylor Loop
Primary User	Primary User
<i>Current:</i> Backpackers	<i>Desired:</i> Guided or independent day or overnight use
Visitor Experience	Visitor Experience
<p><i>Current:</i> Backpackers with permits in units 42 and 43 can utilize Skyline Drive and Moose Creek access routes to get into the backcountry. Backpackers following the Moose Creek access route need to cross Moose Creek 13 times or choose to bushwhack in undulating brushy terrain. Knowing boundaries and bushwhacking around the private property is also required of backpackers.</p> <p>Cultural resources litter this route making for a fun and interesting times of discovery, but can also be safety concerns.</p>	<p><i>Desired:</i> Backpackers would be able to utilize a pedestrian bridge or hand-tram to safely cross Moose Creek and have a clear trail or route to follow through the undulating brush. Cultural resources are well marked, and visitors can learn about their rich histories and the importance of leaving these artifacts in place for other visitors to discover.</p> <p>Backpackers are able to spend several days along the trail either at designated backcountry campsites or dispersed camping.</p>
Development Components	Development Components
<p><i>Current:</i> This route is largely created from historic mining access routes.</p>	<p><i>Desired:</i> A 15-mile loop trail would be established along old mining roads in the Kantishna Hills. The trail would connect Skyline Drive and Moose Creek access routes via Glen Creek and Glacier Peak. Dispersed hiking, a marked route, or constructed trail would allow hikers to connect the two mining routes. A bridge or hand-tram could be constructed to safely cross Moose Creek, and the trail could traverse the bench of the north side of the Creek to Glen Creek.</p> <p>Management plans allow for established backcountry campsites along this loop. Access to Skyline Drive access route could alternatively be established by trail via Wickersham Dome or Camp Ridge Trail. Moose Creek access route and Glen Creek access route are better suited for heavy equipment and off-road vehicles than hikers, but hiking trails could be constructed along these routes. Trail maintenance and construction on either of these routes would allow for continued inholder access.</p> <p>Concerns with this loop include trail alignment near/in creek beds, the possibility of permafrost being present, the existence of wolf dens potentially closing areas for multiple years, and beavers flooding trail infrastructure. Construction of this project would take into account any future reclamation needs on Glen Creek.</p>

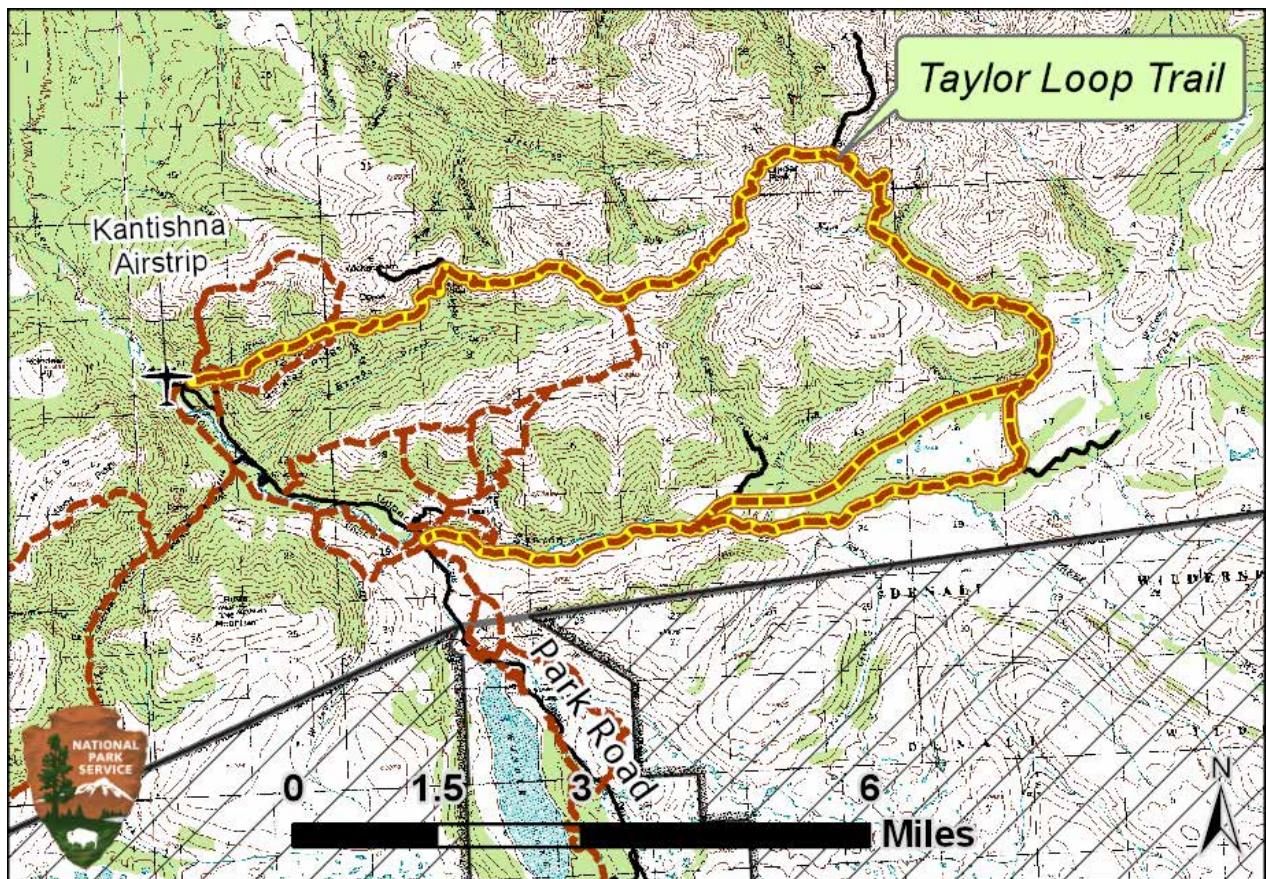


Figure 22. Taylor Loop and trailheads (conceptual).

Recreation Infrastructure:	Washburn Loop
Primary User	Primary User
<i>Current:</i> Independent Users	<i>Desired:</i> Independent day use, guided day use if staying in the Wonder Lake Group Site
Visitor Experience	Visitor Experience
<i>Current:</i> Visitors currently follow informal trails up to the designated wilderness boundary. The informal trail continues on sustainable ground to a ridge with views of the Alaska Range.	<i>Desired:</i> The loop trail would offer spectacular views of Wonder Lake from the ridgetop, as well as dramatic views of Denali and the Alaska Range looking over the McKinley River.
Development Components	Development Components
<p><i>Current:</i> Management plans allow for the possible development of a loop trail in this area.</p> <p>The informal trail is currently disturbed ground from water utility work, hotel site investigation, and years of off-trail backcountry hiking.</p>	<p><i>Desired:</i> This proposed Class 2 trail would provide a recreational hiking experience for Wonder Lake visitors along the ridgeline west of the Wonder Lake Campground. The trail would utilize the informal trails that developed around the abandoned water tank facilities. Long stretches of durable ground allow for easy hiking and minimize development costs. Newly constructed segments would be needed to connect the network of informal trails into a coherent loop trail.</p> <p>A fence or gate may need to be installed to protect administrative infrastructure in the area.</p> <p>A portion of this trail with the best ridgeline views goes into designated wilderness. It is unlikely the park would be successful with keeping the public from seeking out views from the ridge. Minimally constructing or marking the loop on sustainable ground may limit resource damage from informal trailing from occurring. A MRA would be completed to determine what type of trail construction, if any, would be needed, tools used for construction, and use following construction.</p> <p>Preserving the campground experience is important, and this trail would be primarily to serve campground users to minimize the impact of day use in the campground.</p>

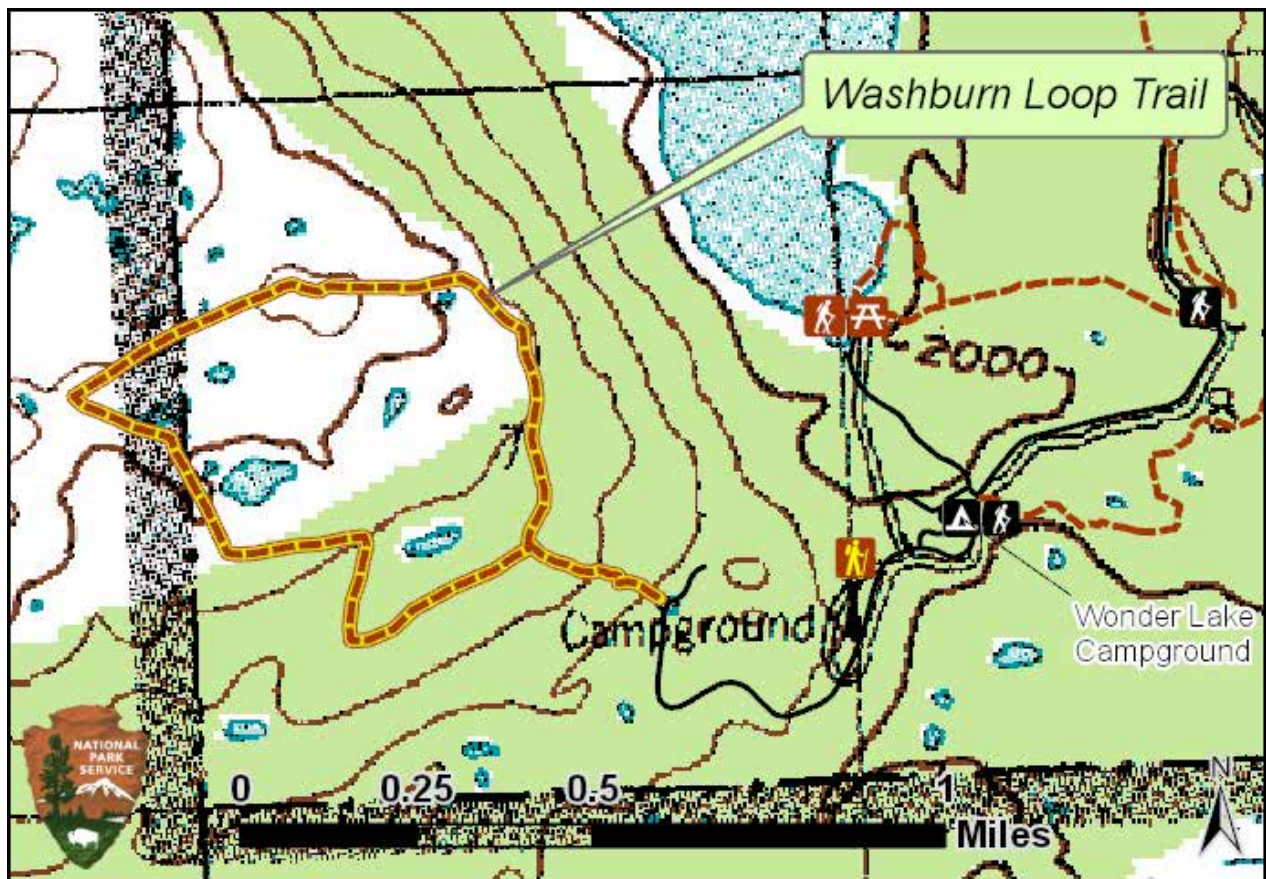


Figure 23. Washburn Loop and trailhead (conceptual).

Dotted black line denotes designated wilderness boundary.

Recreation Infrastructure:	Wickersham Loop
Primary User	Primary User
<i>Current:</i> Independent and guided day use	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> Visitors follow a steep degrading trail along Friday Ridge to views of the Kantishna Hills and easy alpine hiking. An informal trail follows Quigley Ridge, passing some of the most culturally significant sites in the Kantishna area, but little interpretation is currently provided with these artifacts.	<i>Desired:</i> A sustainable half-day trail provides access to easy hiking along alpine ridges. The trail avoids private property and shares the rich cultural history of these ridges.
Development Components	Development Components
<i>Current:</i> The informal trail on Quigley ridge crosses private property.	<p><i>Desired:</i> A class 2 hiking trail would be maintained along informal trail routes on the ridgelines above Friday Creek. Existing informal/historic trails would be rerouted or improved to meet current standards. Historic trails and mining routes along Quigley Ridge would be used. The trails near the “hitching post” would be rerouted to avoid private property or trail easements would be obtained from property owners. Rerouting the trail up the ridge west of Friday Creek would require long segments of new construction.</p> <p>From Wickersham Dome to the “hitching post” the steep informal trail could be rerouted or improved, or if that trail were abandoned, the route could be extended east and follow old mining routes to connect with Skyline Drive and Quigley Ridge. Routing for the trail between the Quigley Cabin on the Park Road and the home site on the Red Top Claim is dependent on where trailheads, campgrounds, and maintenance facilities are located along the Park Road and near Friday Creek, as well as to protect cultural resources.</p>

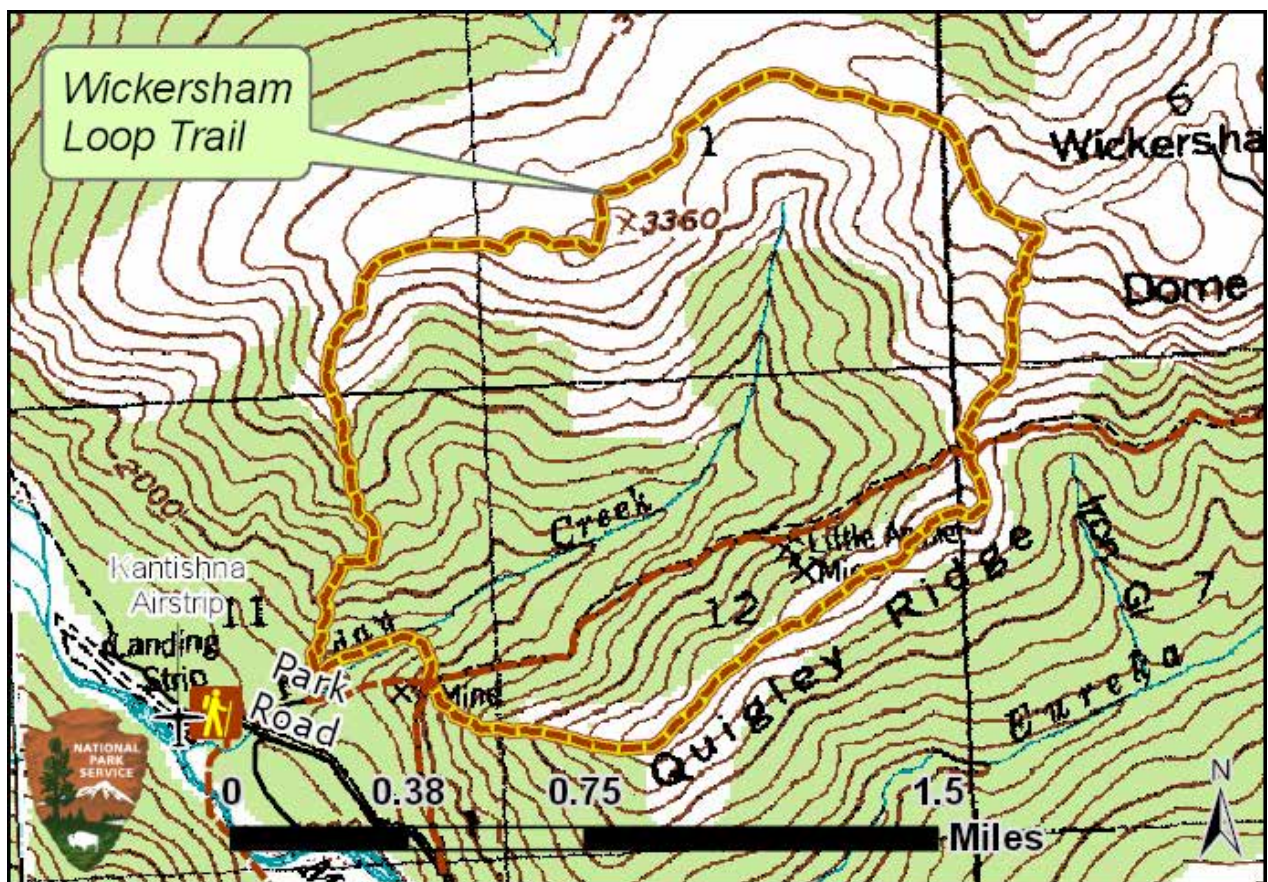


Figure 24. Wickersham Loop and trailhead (conceptual).

Recreation Infrastructure:	Wonder Lake Backcountry Trail
Primary User	Primary User
<i>Current:</i> Independent and guided day use	<i>Desired:</i> Independent and guided day use
Visitor Experience	Visitor Experience
<i>Current:</i> There are a series of informal trails in this area that may be a remnant of the Summer Route. The approximate route goes by historical figure Grant Pearson's cabin on North Face Lodge property.	<i>Desired:</i> This trail serves as access for visitors between Wonder Lake and Kantishna. Taking the trail could be a way for visitors to connect with and learn about the history of the Wonder Lake area.
Development Components	Development Components
<i>Current:</i> The existing informal trail from North Face Lodge to the north end of Wonder Lake has poorly maintained structures along the route. The trail is well-drained through Otter Pass but in very poor condition across flat terrain towards Moose Creek. The trail is braided and poorly defined as it approaches the Park Road near the Anderson Homestead.	<i>Desired:</i> The proposed construction of a barrier-free (ABA) Class 3 trail would require abandoning the current alignment and rerouting to more durable ground. The trail could route through the Boundary Pit and Moose Creek Bridge if those become established trailheads. Routing along Lake Creek would need to avoid private property, and the trail could be sited to minimize viewshed disturbance from North Face Lodge.

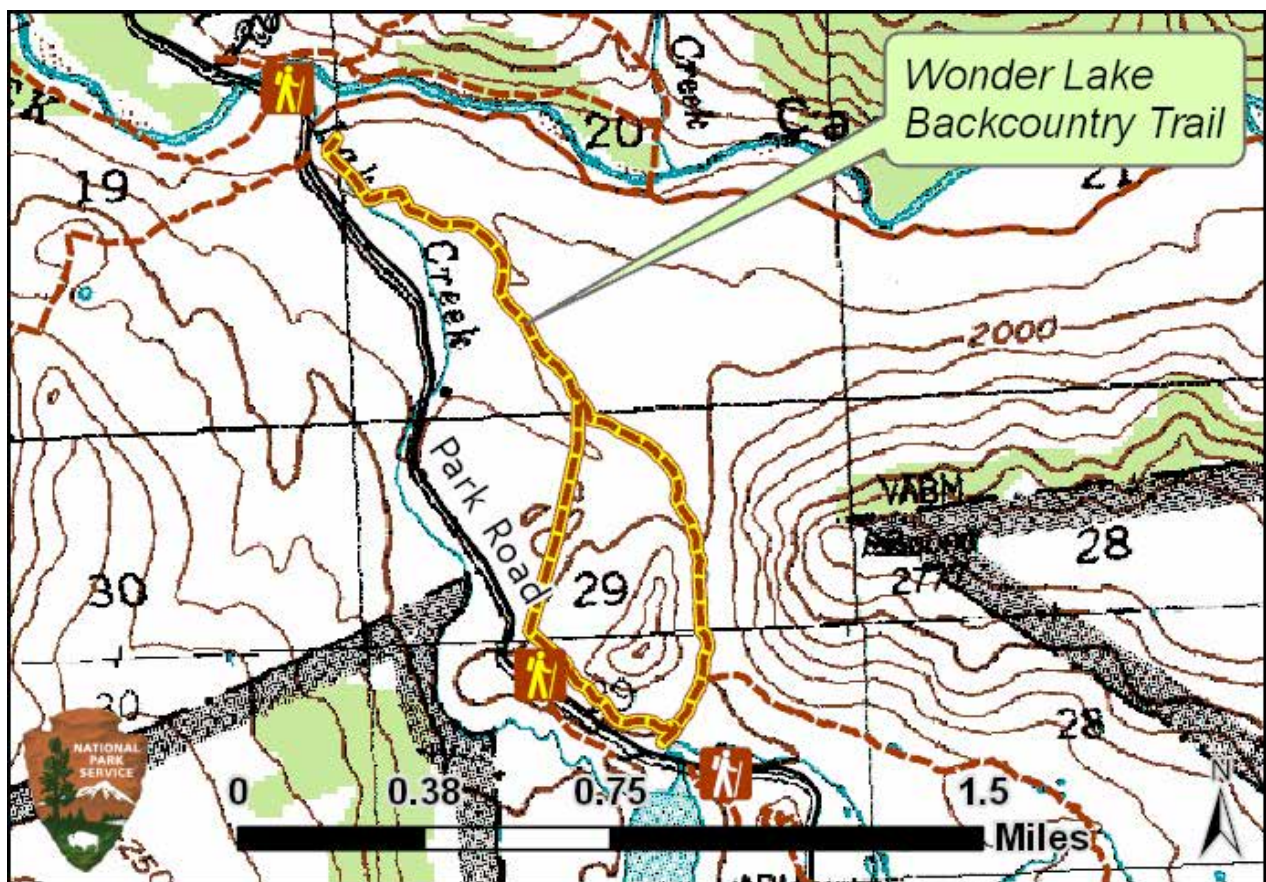


Figure 25. Wonder Lake Backcountry Trail and trailhead (conceptual).

Transportation Infrastructure

Transportation Infrastructure:	Shuttle Loop
Primary User	Primary User
<i>Current:</i> A shuttle loop doesn't currently exist in this area.	<i>Desired:</i> Independent users and commercial groups
Visitor Experience	Visitor Experience
<i>Current:</i> In the height of the summer, four transit buses will depart Wonder Lake to Kantishna (8a, 1p, 5p, 7:20p). Three of those buses will return to Wonder Lake before heading back east (2p, 3p, 8p). ¹⁰ This can make scheduling day trips between the areas challenging, especially for larger groups.	<p><i>Desired:</i> The proposed shuttle loop could operate between the end of the road in Kantishna and the Wonder Lake Campground with dedicated stops and flag-down service. If desired, the NPS could consider the Eielson Visitor Center as a shuttle loop destination.</p> <p>The shuttle could be a bus or sprinter van depending on what it needs to accomplish. Computer modeling and public feedback would guide on appropriate run times to accommodate use.</p> <p>The shuttle loop could be a free system similar to the Riley Creek and Savage shuttles or a fee-based system similar to the "Teklanika Pass."¹¹ A lump fee could be considered for businesses interested in using a fee-based shuttle.</p> <p>An alternative to a continuous shuttle loop could be to have camper buses overnighing in the area to run multiple loops between Wonder Lake and Kantishna before either heading eastbound or ending their shift in the area.</p>
Business Components	Business Components
<i>Current:</i> Transit buses are operated by the Type 1 Concessioner. Lodge buses move their visitors as allowed by their contracts or CUAs.	<i>Desired:</i> The NPS could consider using the existing Type 1 concessioner or another contracting instrument to provide the service.
Development Components	Development Components
<i>Current:</i> A few undeveloped or informal trailheads exist, but most of the related infrastructure would need to be constructed.	<p><i>Desired:</i> Parking or bus pull-outs would be developed at appropriate trailheads, the airstrip, and visitor nodes.</p> <p>Associated parking would accommodate multiple buses or sprinter vans. Lodging for shuttle drives and mechanics, wash bay, and fuel storage would be provided at an appropriate administrative facility.</p>

¹⁰ Referencing the 2019 June 20 to August 7 bus schedule.

¹¹ The Teklanika Pass allows campground users to jump on a transit bus during their stay at the campground.

Transportation Infrastructure:	Trailheads and Parking
Primary User	Primary User
<i>Current:</i> Day hikers, families	<i>Desired:</i> Day hikers, backpackers, families
Visitor Experience	Visitor Experience
<i>Current:</i> The visitor experience at the existing trailhead is designed to provide quick information and keep people moving onto the trail. No design elements or thought has gone into the visitor experience on informal trails.	<i>Desired:</i> Trailheads are easily identifiable points that serve as nodes between the Park Road and the backcountry. They are a part of the park's circulation system and have information boards that facilitate safe and enjoyable trail use. Toilets are provided at trailheads or nearby at the terminus of overnight trails.
Development Components	Development Components
<p><i>Current:</i> The only formal trailhead exists at the McKinley Bar trail. It consists of information signage and parking for three vehicles. Other informal trailheads exist as cleared areas near an informal trail. Most do not have infrastructure, but some include SSTs used by tour buses.</p> <p>No infrastructure exists at informal trailheads, although rock cairns may mark an entrance.</p>	<i>Desired:</i> Infrastructure would include signage and vehicle parking or bus pullouts. No trash receptacles would be installed. No new bathroom facilities would be installed except at trailheads for the Brooker Loop and Taylor Loop (could be shared by campground or bus turnaround).

Table 4. Facilities at existing and potential trailheads.

Trailhead	Existing or Potential Trailhead	Connected to Park Circulation	Waysides or Signage Present	Bathrooms, Trash Receptacles, Parking Available?	Trailhead Condition
McKinley Bar	Existing	Yes, by foot or transit	Orienting signage, waysides on trail	Small parking lot	Trailhead okay. Needs a trail connection to the Wonder Lake Campground.
Day Use Area	Potential	Yes, by foot or transit	Orienting and interpretive signage	Bathrooms, trash, boardwalk, picnic tables	Only bus drop off and limited picnic tables
Anderson	Potential	By transit	Orienting signage	Outhouse	Old outhouse, gravel path
Blueberry Hill	Potential	By transit	Orienting signage	None	None
Camp Ridge	Potential	By transit	Orienting signage	None	None
Cloudberry/ Brooker/ Ditchline	Potential	By foot or transit	Orienting and interpretive signage	Bathrooms nearby, small parking lot	Pull-out on the Park Road. No infrastructure. Temporary storage.
Reflection Pond	Potential	By transit	Orienting signage	Small parking lot	Parking with limited signage
Taylor	Potential	By foot or transit	Orienting and interpretive signage	Large parking lot, bathrooms nearby	Currently North Face Parking Lot with storage
Washburn	Potential	By foot	Orienting signage	None	Vehicle turn around; consider turning access road into trail
Wickersham/ Taylor	Potential	By foot	Orienting and interpretive signage	Bathrooms nearby, parking at airstrip	None
Wonder Lake Ranger Station	Potential	By foot or transit	Orienting and interpretive signage	Bathrooms, parking, trash receptacles, visitor contact station	None

Transportation Infrastructure:	End of the Road
Primary User	Primary User
<i>Current:</i> Kantishna transit, Kantishna Experience, Kantishna campground and rustic lodging users, backpackers, day hikers, and Lodge guests	<i>Desired:</i> Kantishna transit, Kantishna Experience, Kantishna campground and rustic lodging users, backpackers, day hikers, and Lodge guests
Visitor Experience	Visitor Experience
<i>Current:</i> The end of the road turnaround is at mile 92.5 of the Park Road near the end of the airstrip. Visitors treat it as a destination, taking photos by the end of the road sign. NPS staff have also noted that visitors gravitate toward the active airstrip and helipad immediately adjacent to the bus drop-off location. This is a safety concern.	<i>Desired:</i> The Park Road would turn around near the Gallop Cabin utilizing part of the driveway accessing Denali Backcountry Lodge to loop back to the Park Road. Visitors that have made it to the end of the Denali Park Road are able to pose by the sign, visit the Quigley Cabin a short accessible walk away (0.12 miles), and use SSTs before boarding their buses, walking to the nearby campground, embarking on their journey into the backcountry, or returning to their lodge. An administrative use road would be maintained to the Kantishna airstrip.
Development Components	Development Components
<p><i>Current:</i> The last 0.3 miles of the Park Road would become the airstrip access road. The driveway accessing the Denali Backcountry Lodge would make up part of the new turnaround location.</p> <p>The Park Road Historic District ends at the south end of the airstrip near the Quigley Cabin. Moving the end of the Park Road to the Gallop Cabin would have a negative impact on the historic district. Construction at the Quigley Cabin would require engineering Friday Creek below the Park Road, benefiting both the new end of the Park Road and the airstrip.</p>	<p><i>Desired:</i> A 0.12 mile ADA trail could be constructed from the turnaround to the Quigley House (comparable to the Savage Cabin) including a trail bridge. A trail bridge would also be provided across Eureka Creek as part of this effort. The Park Road at this location is not at an accessible grade. Toilets and appropriate waysides would be provided.</p>

Transportation Infrastructure:	Bus Depot
Primary User	Primary User
<i>Current:</i> No west end bus depot exists.	<i>Desired:</i> Kantishna transit, Kantishna Experience, Kantishna campground and rustic lodging users, backpackers, and Lodge guests
Visitor Experience	Visitor Experience
<i>Current:</i> No west end bus depot exists.	<p><i>Desired:</i> This is a single location (there are two proposed locations being considered) where visitors can transition from one type of vehicle to another, similar to the Denali Bus Depot but at a much smaller scale. Transit buses could drop visitors wanting to continue on to Kantishna at this depot and then would return east. Visitors could then be picked up by shuttle bus, CUA vehicle, or lodge bus.</p> <p>Though minimal in nature, visitors would be able to get out of the elements while they wait for transit and have access to basic amenities such as bus schedules, trash receptacles, and vaulted toilets.</p>
Development Components	Development Components
<i>Current:</i> No west end bus depot exists.	<p><i>Desired:</i> The sites identified for a potential west end bus depot would be areas of previous disturbance that could be repurposed as a transition point. The bus depot should include sitting areas, bike storage, trash receptacles, bathrooms, transit information, and trail maps.</p> <p>If constructing at Dalle Molleville the park could consider moving the road to the southwest and constructing the bus depot at the location of the current road. The unused acreage would be rehabilitated.</p>



Figure 26. Approximate location of bus depot at Dalle Molleville (conceptual).



Figure 27. Approximate location of bus depot at the North Face parking lot (conceptual).

Administrative Infrastructure

The National Park Service considered the need for potential new administrative infrastructure in the Kantishna and Wonder Lake areas, in order to accommodate potential increased recreation uses and opportunities.

The NPS first discussed existing administrative locations and footprints in the area (table 5). There are a number of factors that contribute to the potential need for the removal of existing administrative sites at Dalle Molleville and Friday Creek Camp. Both were approved on a temporary basis. Dalle Molleville, however, is an adverse effect on the Park Road Cultural

Resource and is considered an eyesore distracting from the visitor experience in Wonder Lake. The Friday Creek Camp administrative site is in the Friday Creek floodplain and struggles with aufeis on an annual basis; additionally, it is in a hazardous location during extreme flooding events. The Friday Creek drainage is in line to be rehabilitated to reduce flooding impacts to park and inholder infrastructure

Next, NPS determined existing administrative needs for workplace, storage, and sleeping quarters, and estimated potential future needs should there be more robust infrastructure and visitor use of the area (table 6).

Table 5. Existing administrative locations in Kantishna and Wonder Lake.

Existing Administrative Locations In Kantishna and Wonder Lake	Approximate Acreage
Wonder Lake Ranger Station	0.75 acres
Dalle Molleville	0.25 acres
Wonder Lake Admin (Bus/Host camp)	0.25 acres
Friday Creek	2.75 acres
Airstrip Facilities	1 acre
Sub Total	5 acres
Other Park Admin Locations	
Toklat Road Camp	2.5 acres
Riley Creek Admin Camp	2 acres

Table 6. Current administrative needs and potential maximum future administrative needs.

Administrative Need	Current Needs	Potential Future Needs
Work Space	<ul style="list-style-type: none"> Meeting space (yurt) Maintenance shop Office space at Wonder Lake Ranger Station (2 work stations) 	<ul style="list-style-type: none"> Meeting space (yurt) – retain Maintenance shop – retain Interpretation and Education (I&E) Division office (3 workstations) Resource Management, (RM) Visitor and Resource Protection (VRP), and Maintenance divisions work stations Trails shop Mechanic shop for shuttle buses Vehicle washing facility Fueling station (unless same as airstrip)

Administrative Need	Current Needs	Potential Future Needs
Storage	<ul style="list-style-type: none"> • Maintenance storage • RM Division storage • Commercial operator storage for Type II Dog Sled Contract • VRP Division/snowmachine storage • Parking for heavy equipment 	<ul style="list-style-type: none"> • Maintenance storage – retain • RM Division storage – retain • Commercial operator storage for Type II Dog Sled Contract – retain • VRP Division/snowmachine storage – retain • Parking for heavy equipment, 10 government vehicles, private vehicles, and 3-4 Shuttles • I&E Division storage (props, publications, program materials) • Kennels storage (dog food, human food, winter gear – no summer storage)
Sleeping Quarters	<ul style="list-style-type: none"> • Sleeping quarters for 8 staff • Sleeping quarters for 2 bus drivers • Trails camp • Transient housing 	<ul style="list-style-type: none"> • Sleeping quarters for 20 staff • Sleeping quarters for 4 bus drivers • Trails camp for youth, volunteer crews, and veg crews • Transient housing with up to 26 beds, kitchen, bathing, laundry facilities (8 trails, 6 fire, 12 resources or researchers) • Year-round quarters
Other	<ul style="list-style-type: none"> • Ranger station • Aviation facilities (helibase, Avgas and JetA tanks, equipment storage) • Communal library • Toilets, laundry, showers • Communal kitchen at Friday Creek • Communications center/I&E Division office at Friday Creek Road Camp 	<ul style="list-style-type: none"> • Ranger station – retain • Utilities: water, power generation, bath house, internet access, phone • Aviation facilities (helibase, Avgas and JetA tanks, equipment storage) • Communal library – retain • Area for staging Incident Management (cleared space with IT support and electricity off the main road) • Communications Center (secondary/emergency purposes)

A range of administrative locations were discussed, including locations that would need to be rehabilitated and new locations that would allow the park to consolidate the administrative footprint (table 7). Locations in consideration for siting of administrative facilities in the Kantishna area (figure 28) or Wonder Lake area (figure 29) include along the Moose Creek Access Route (figure 30), near the Kantishna Airstrip (figure 31), at the Wonder Lake Ranger Station (figure 32), and/or the Wonder Lake Campground (figure 33).

Table 7. Locations in consideration for siting of administrative facilities.

Potential Location	Approximate Site Acreage	Potential Use
Moose Creek Access Route (approximately 1 mile up access route from Park Road)	10.0 acres	<ul style="list-style-type: none"> - Work space - Storage - Sleeping quarters - All other except aviation facilities
Kantishna Airstrip	8 acres	<ul style="list-style-type: none"> - Work space - Storage - Process gravel - Communications - Aviation facilities - Incident Management Team (IMT) Staging
Wonder Lake Ranger Station	2 acres	<ul style="list-style-type: none"> - Work Space - Sleeping Space - No buses overnighting here
Wonder Lake Campground	0.25 acres	<ul style="list-style-type: none"> - Sleeping space for bus drivers and campground host

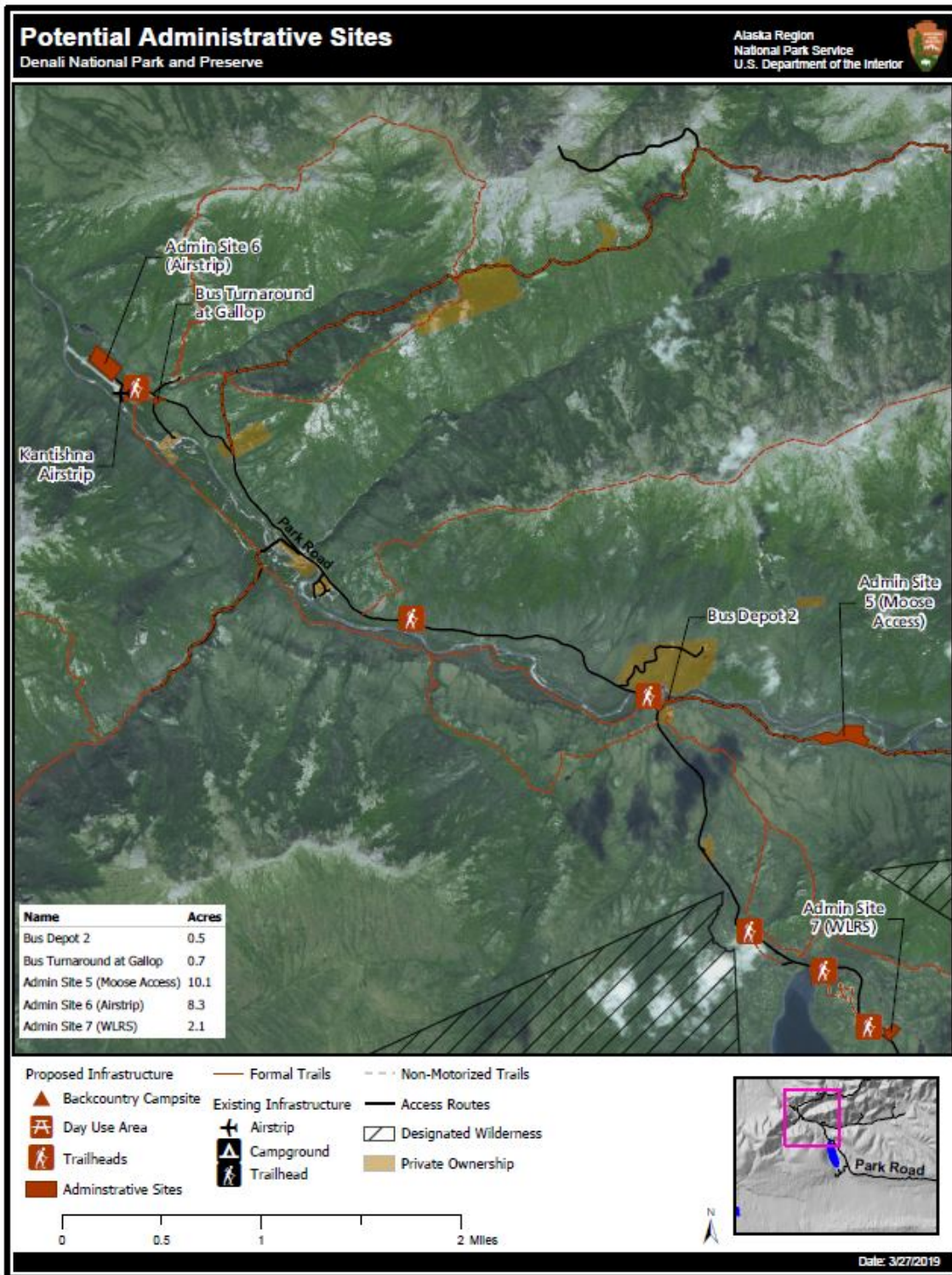


Figure 28. Potential administrative facility site locations in Kantishna.

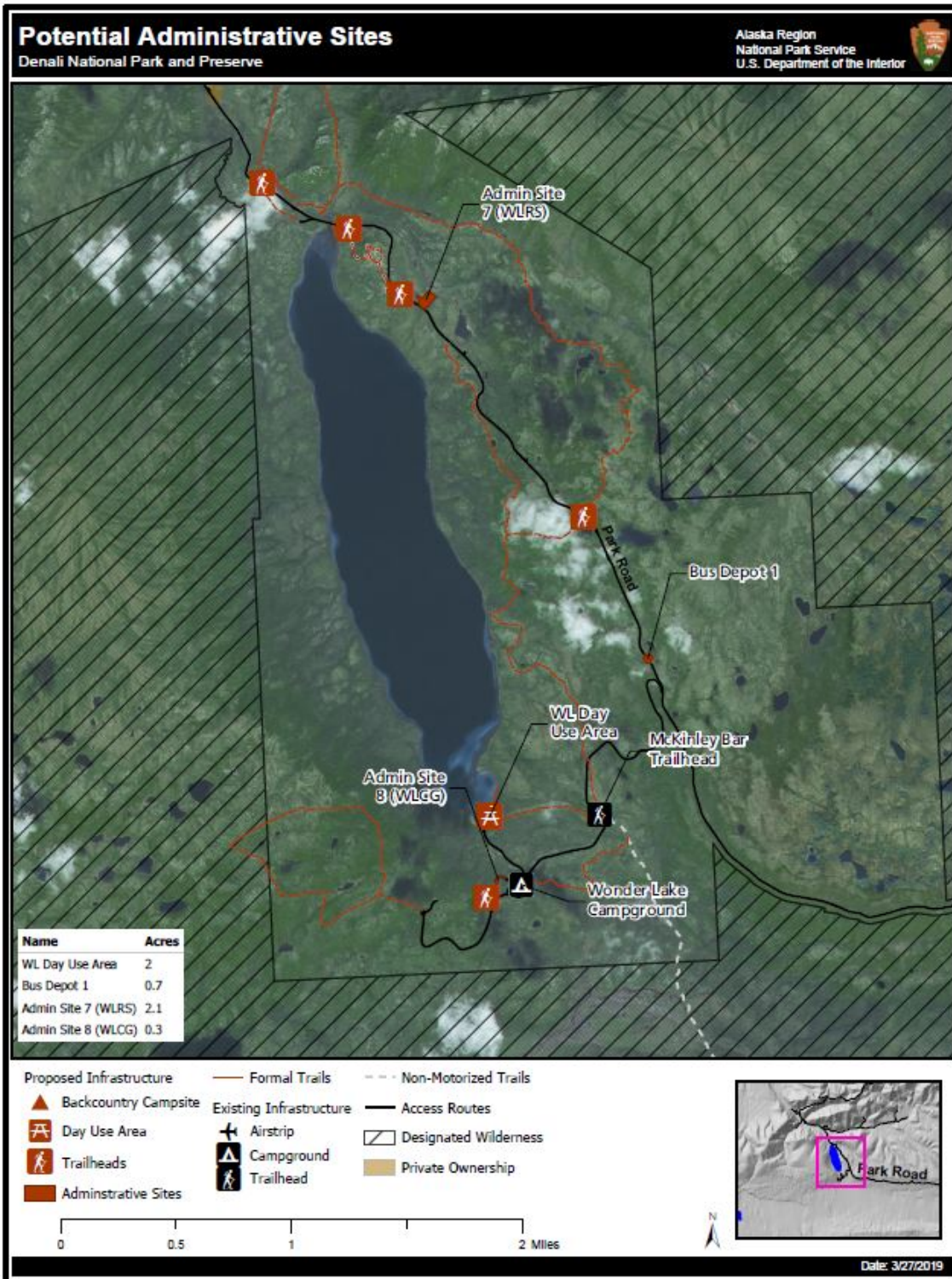


Figure 29. Potential administrative facility site locations in Wonder Lake.

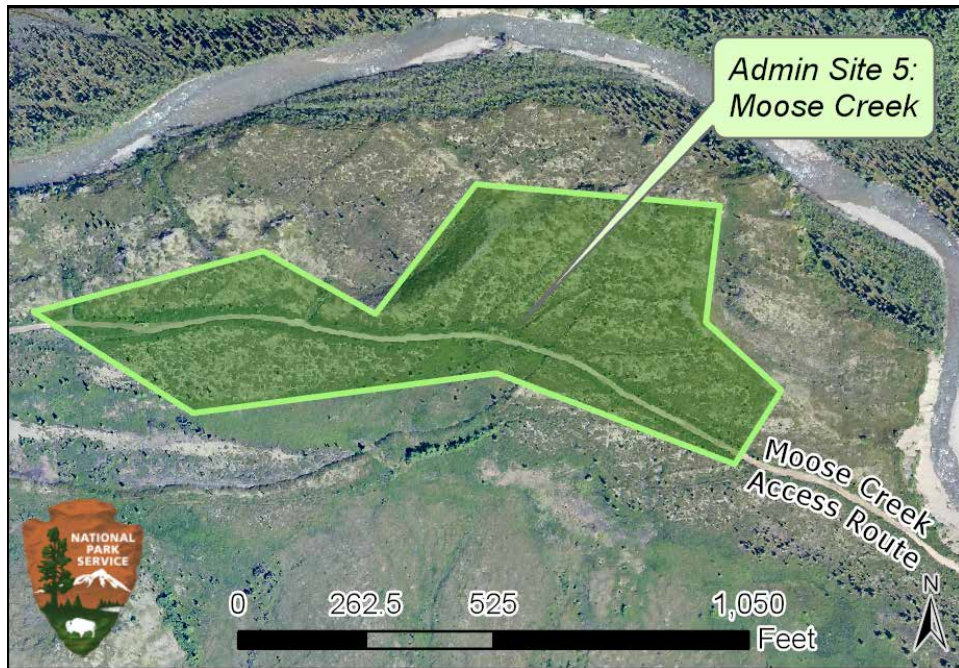


Figure 30. Potential administrative facility site on Moose Creek Access Route.



Figure 31. Potential administrative facility site near Kantishna Airstrip.

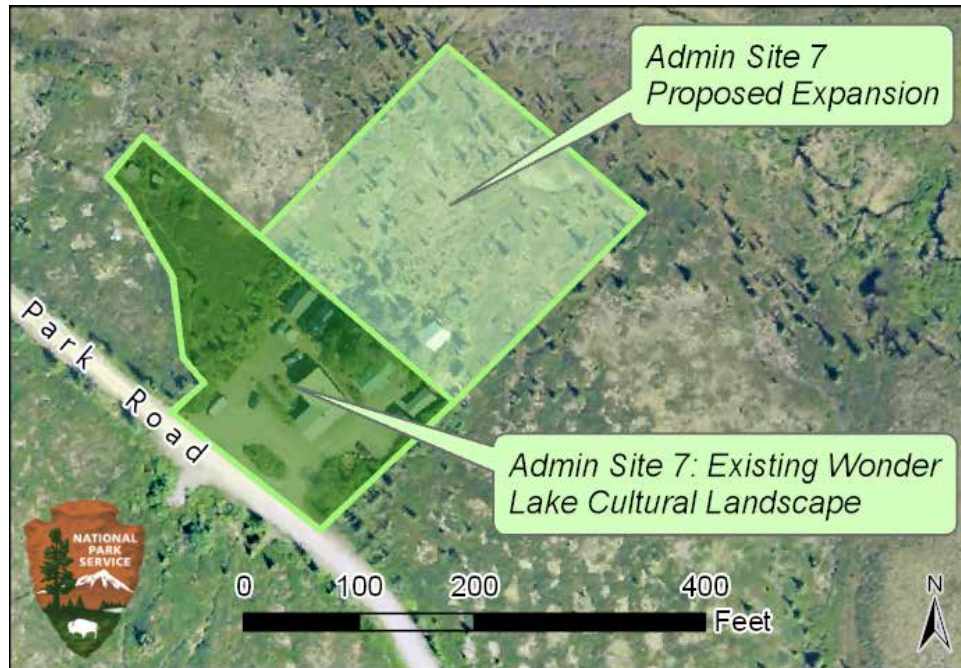


Figure 32. Potential administrative facility site at the Wonder Lake Ranger Station. (Note: the brighter polygon represents the general location of the Wonder Lake Ranger Station Cultural Landscape. New and changes to facilities in this area should follow recommendations in the Cultural Landscape Report.)

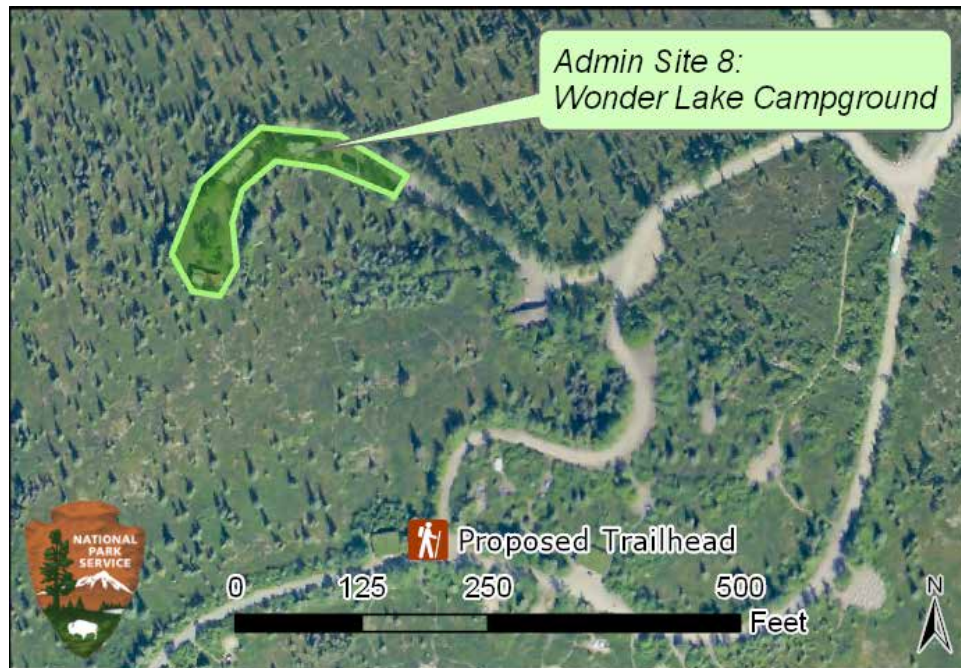


Figure 33. Potential administrative facility site at the Wonder Lake Campground.

VISITOR EXPERIENCE

Introduction

This section provides a description of who currently visits the Kantishna and Wonder Lake areas; visitor use trends in how visitors have and could use the areas; current and potential future supported uses that are authorized and/or encouraged by the National Park Service; current and potential future visitor flow to share how visitors move around the area; and current and potential key messaging.

Visitor Description

Background

Overall. An estimated 700 staff and visitors can overnight in the Kantishna and Wonder Lake areas on any given evening. An estimated average of 600 visitors make it to these areas daily by transit or tour bus.¹²

Both day hikers and backpackers report encounters with the NPS staff as a positive impact on their experience.

Day User Survey. A 2018 day user survey revealed that day hikers in the analysis area are likely college educated, from the contiguous United States, have a median age of 49 years, and are traveling with family in groups of 3-4 people. They tend to hike 4.5 hours a day, covering 3.5 to 4 miles (Keller, R. 2018^{ix}).

About one-third of day hikers prefer self-guided informational materials as opposed to guided tours in Kantishna and Wonder Lake. A nearly equal amount would prefer guided services on a physically moderate hike or to share natural information. About half of day

hikers consider themselves somewhat prepared for a bear encounter, where more than a third consider themselves not at all prepared for a bear encounter.

Backcountry User Survey. A 2017 backcountry user survey revealed that backpackers are on average 33 years old, college educated, are traveling with family in groups of 2-3 people. They hike less than 8 hours a day, covering 4.6 miles.

This is a first backpacking trip in Denali for four out of five backpackers, and they chose the park for its solitude, adventure, and wildlife viewing. Nearly half of these backpackers have extensive backcountry experience, while a quarter have no experience. Approximately two-thirds of backpackers self-reported that they are well prepared for a bear encounter (Keller, R. 2018^x).

Four out of five backpackers in the Kantishna area prefer Denali to be trail-less. Three out of five day hikers prefer a trail-less experience and one-third support expansion of the trail system. (Keller, R. 2018^{xi}). These numbers could be skewed by lodge maps that represent all trails as formal.

Current Users

There are currently opportunities for these user groups in the Kantishna and Wonder Lake areas:

- Independent day users – visitors day hiking without a guide
- Independent overnight users – visitors not staying at a private lodge overnight, but spending an overnight at a campground or in the backcountry unguided
- Lodge overnight users – visitors staying at a private lodge overnight

¹² Estimates are based on vehicle data and general knowledge of NPS and private operations.

- Independent lodge day users – visitors staying at a private lodge overnight but day hiking without a guide
- Commercial lodge day users – visitors staying at a private lodge overnight that partake in a guided day use activity

Range of Potential New Users

Some or all of these new user groups may appear with the implementation of this plan:

- Commercial non-lodge day users – visitors not staying at a private lodge overnight that partake in a guided day use activity
- Commercial non-lodge overnight users – visitors not staying at a private lodge overnight that partake in a guided overnight excursion
- Commercial lodge overnight users — visitors staying at a private lodge overnight that partake in a guided overnight excursion

Local Visitor Use Trends

Use in backcountry units has steadily increased from 2013, but is not nearing capacity. Table 8 depicts the days in the season for which a permit is issued for each backcountry unit (percent days in use) and for which the maximum number of permits is distributed for each backcountry unit (percent of days in use full). The backcountry units in designated wilderness are units 15 and 36. Backcountry units 41, 42, and 43 contain ineligible and eligible wilderness.

Table 8. Backcountry visitation.

Backcountry Unit	Quota	% of Days in Use	% of Days in Use Full
15	4	65%	31%
36	2	39%	80%
41	12	24%	0%
42	12	48%	2%
43	12	27%	0%

Overall, the days in use for all of these units has increased from 28% in 2013 to 41% in 2018. In 2013, 19% of the days in use were full, as opposed to 22% in 2018.¹³

A 2017 study determined that backpackers park-wide set up camp within 1.6 miles of the Park Road, and typically travel through backcountry units parallel to the Park Road on their backcountry trips (Stamberger, L. et al. 2018^{xii}).

In 2018 the 28 sites of the Wonder Lake Campground were booked to 93-95% capacity for July and August. In 2017, this was true of June, July, and August. September is closer to 75% both years (Lichneckert, K. 2018^{xiii}). None of the 28 sites are designated for group camping. NPS is aware that some visitors are displaced from the full campground to backcountry units 15 or 36, although the number is likely statistically nominal.

The NPS is aware that some backpackers illegally camp within the Backcountry Day Use area in Kantishna (Stamberger, L. et al. 2018^{xiv}). The length of time it takes to get to Kantishna, the limited number of buses that access the area, and visitors underestimating the terrain may be factors that contribute to non-compliance with backcountry camping rules.

The challenge for NPS is to determine what the appropriate expansion of trail and overnight camping facilities should be to meet the needs of current users and proactively accommodate future users.

Visitor Uses

The following are a list of existing and proposed visitor uses in Kantishna and Wonder Lake. It is not meant to be exclusive of other activities that could be supported by NPS. New activities will be evaluated according to the 2018 Commercial Services Strategy, NPS policy and direction, and applicable laws or court guidance.

Bicycle Use

Current: Bicycle use is allowed on the Park Road and park access routes.

Proposed: Supporting bicycle use on the multi-use Ditchline Trail could provide a more family- and visitor-friendly alternative to bicycling on the Park Road when it is dusty.

Subsistence Use

Current: Subsistence use is supported in Kantishna.

Proposed: If there is an increase in subsistence use, the park could consider protections, including subsistence only trails or trail closures, to reduce a potential conflict of use between subsistence and recreational users.

On-Trail and Off-Trail Hiking

Current: Both of the uses are appropriate in Denali.

Proposed: The park could continue to provide unconfined opportunities in these areas while creating a trail network to provide durable surfaces and a structured visitor experience.

Backpacking

Current: Dispersed backpacking is supported outside of the front country developed area or backcountry day use area.

Proposed: The park could support backpacking either at designated campground locations or on durable surfaces outside of a backcountry hiker area.

¹³ This data is based off of issued permits and was provided by Backcountry Information Center staff.

Fixed Wing Flying

The Alaska National Interest Lands Conservation Act (ANILCA) authorizes independent use of fixed wing aircraft for backcountry access. Campsites could be designated or dispersed. Backcountry fly-in camping would not be considered commercially without further compliance and completion of an Extent Necessary Determination and Minimum Requirements Analysis.

Other New Uses

Refer to the Commercial Services Strategy (NPS, 2018^{xv}) and existing Extent Necessary Determinations to qualify new proposed commercial uses.

Visitor Flow

Visitor flow refers to the ability of visitors to move around the Kantishna and Wonder Lake areas easily. The Kantishna airstrip and the Wonder Lake Campground are nine miles apart following the Park Road. This can be a long distance to walk on a dusty road. An opportunity exists to create a desirable visitor experience that includes a well-designed and designated trails system that can funnel and direct hikers to visitor nodes. Visitor flow should also be considered for visitors on bicycle and other approved uses.

Visitor nodes include the Wonder Lake Day Use Area, all trailheads, Wonder Lake Ranger Station, campground location, Quigley Cabin, Kantishna airstrip, the end of the road, and bus depots.

Other considerations for improving visitor flow are directional loop trails, avoiding dead end trails without a clear destination, avoiding depositing visitors onto the Park Road without clear direction, and having clear, concise directional signage.

These nodes could also be connected by shuttle or other transit bus to serve a wider breadth of visitors.

Messaging

Messaging includes both interpretation and information sharing.

Expectation setting could include:

- trail difficulty and function of backcountry campsites
- the proximity to airstrip, private property, and commercial activity
- available interpretive, transportation, and emergency medical services
- acceptable and unacceptable uses

Education messaging could include:

- water hazards
- wildlife interactions and reporting
- Leave No Trace practices
- respecting private property
- respecting and being safe around cultural and historic resources
- use of backcountry toilet.

GUIDED SERVICES

Introduction

This section describes current and potential new guided services. It also discusses a potential method for determining the allocation of use based on total visitor capacity of the area.

Interpretive opportunities could tell the human stories of Kantishna and Wonder Lake including the park administrative history, mining, and native connection and use of the land. These stories easily tie into the natural history of the landscape and why it drew and continues to draw us in as humans.

Key information to share includes setting visitor expectations and education on appropriate backcountry behavior.

Existing Guided Services

The existing contracts are authorized by NPS to provide guided hiking, guided backpacking, air taxi, and flight-seeing services to visitors.

Existing CUA holders that do not have inholder access rights to travel the Park Road need to work with the transit bus concessioner or air taxi operators to get their clients to Kantishna.

The park will move guided hiking contracts to Commercial Use Authorizations (CUAs) in 2020. This will allow for additional local or fly-in businesses to offer additional guiding opportunities to visitors, including visitors not on a packaged tour with a private lodge. This shift to CUAs also allows the park to try providing new guided experiences on a one-to-two-year commitment instead of the 10-year commitment.

Range of Potential New Guided Services

New potential opportunities for guided services could include guided camping and guided biking. NPS could also consider offering free ranger-led hikes as an affordable guided opportunity.

The park could allow CUA holders to purchase more tickets and guide on existing transit buses, consider adding CUA specific buses that operate like a Discovery Hike bus to the current transit system, or allow CUA holders to travel independently on the Park Road in private vehicles.

Allocation of Guided Services Use

Management of Guided Services. The 2006 *Backcountry Management Plan* limits commercial use to 50% of total potential visitor use in Kantishna (New Park) and 25% in Wonder Lake (Old Park). Some NPS management challenges related to guided services includes managing to the thresholds defined in the BCMP, reducing congestion of guided groups at sites such as the Quigley Cabin, and providing a method for CUA holders that don't have access rights to the Park Road the ability to move their clients around.

The NPS could consider setting capacities for guided use on trails and in backcountry units. This would maintain a sense of solitude for guided and independent visitors, and ensure that the resource is protected during continuous and repeated use.

Guiding in Wilderness. An Extent Necessary Determination is currently being written to inform the extent of guided primitive recreation in designated and eligible wilderness commitment typical of contracts.

VISITOR CAPACITY

Introduction

To fulfill the requirements of the 1978 National Parks and Recreation Act (54 USC 100502^{xvi}), visitor capacity identifications are required for all destinations and areas within national park units (IVUMC 2016^{xvii}). Visitor capacity is a component of visitor use management and is the maximum amounts and types of visitor use that an area can accommodate while achieving and maintaining the desired resource conditions and visitor experiences that are consistent with the purposes for which the area was established.

Visitor capacity is identified by considering management direction and existing planning and other guiding documents, and then defining an analysis area, current use, desired conditions, indicators and thresholds, limiting attributes, and proposed infrastructure.

Any significant change to infrastructure or management of an area would result in a new capacity determination. As part of this planning process, the NPS could consider setting capacities for independent and guided use on trails and in backcountry units. This would maintain a sense of solitude for guided and independent visitors, and ensure that the resource is protected during continuous and repeated use.

The need for additional indicators and thresholds in proposed management zones and the Backcountry Day Use Area are identified and will be further developed prior to a final plan being released.

This process will result in an identified visitor capacity and associated implementation strategies to manage to the capacity. A few preliminary pieces are described below that

will inform the discussion about visitor capacity, which will be refined and expanded upon as this planning process proceeds.

These changes would be acknowledged through a compliance process.

Existing Planning and Guiding Documents for Visitor Capacity

Determining visitor capacity will be based upon existing planning and other guiding documents, such as the *2006 Backcountry Management Plan*.

Allocation is the process of distributing visitor capacity among a variety of uses or opportunities to achieve or maintain desired condition. The BCMP states that 50% of total visitor use in the New Park can be commercial use, and that 25% of total visitor use in the Old Park can be commercial use.

Additionally, the BCMP provides encounter rate thresholds for individuals and groups that could be applied to determine how, when, where, and under what conditions guided groups could operate.

This analysis would need to be applied to each trail and backcountry unit with commercial use. Different trail types and trail lengths could result in more or less commercial use.

Loop trails with traffic flow in one direction could allow more commercial use due to low frequency of passing. In areas where desired conditions favor solitude and less frequent encounters with large groups (defined as six or more individuals), the NPS may promote smaller commercial group sizes of four visitors and one guide. Table 9 provides an example of threshold guidance provided for encounter rates in the *2006 Backcountry Management Plan*.

Table 9. Example of threshold guidance provided for encounter rates in the BCMP.

Descriptor	Description and Standard
Very High	Visitors commonly encounter other parties in these areas. They generally encountered 10 or fewer parties per day.
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.
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 unlikely to encounter other parties in these areas during the course of their backcountry trip.
N/A	There is no standard for encounter rate in this area. Visitors may always be within sight or sound of other visitors.
Descriptor	Encounters with Large Groups
Yes	1 or 2 of the parties encountered may have more than 6 people.
No	No parties are encountered that are larger than 6 people.

Analysis Area

The analysis area for the visitor capacity would include the Kantishna and Wonder Lake areas, as defined by the “Geographic Scope of the Plan” section earlier in this chapter.

Current Use

Current use is generally described by the “Visitor Experience” section earlier in this chapter. This information will continued to be refined through additional input and information gathered prior to development of a compliance document.

Desired Conditions

Desired conditions are described in the “Desired Conditions” section earlier in this chapter. This information will continued to be refined through additional input and information gathered prior to development of a compliance document.

Indicators and Thresholds

The *2006 Backcountry Management Plan* provides a list of 10 indicators and an associated threshold for each management area that help the park to adaptively manage these areas. Recent social science conducted within the analysis area (Keller, R. 2018^{xviii}) shows that thresholds have been exceeded for several indicators in several management areas in the Kantishna and Wonder Lake areas.

Potential Change: NPS is considering creating indicators and thresholds to better understand and manage use in the existing Backcountry Day Use Area where no indicators or thresholds currently exist (note that new park and old park could be managed differently in terms of commercial allocation). The *1997 Entrance Area Development Concept Plan* states those indicators could be wildlife-vehicle

interactions, the number of informal trails, the need for wildlife closures due to inappropriate human behavior, social crowding, number of parties seen on and off trail, and traffic congestion on the Park Road (NPS, 1997^{xix}). An additional indicator identifying thresholds for protecting historic structures or prehistoric sites could also be included.

Additionally, if a new Overnight Hiker management area is created for backpacking trails and designated backcountry campsites, NPS would develop thresholds for the existing 10 indicators defined in the *2006 Backcountry Management Plan*.

See table 10 for a description of existing indicators and thresholds.

Limiting Attributes

A limiting attribute(s) is what most constrains access to and visitor use of an area. The BCMP identifies indicators and measurable thresholds to achieve desired conditions for resources and visitor experience. Limiting attributes could include natural sound disturbance (could impact access by air to the area) and encounter rates (could impact number of people or groups allowed in an area). These both stem from the park’s desire to preserve a wilderness-like feel in and outside of the Kantishna and Wonder Lake areas. The park currently exceeds the Natural Sound Disturbance threshold in management zone B, OP1, and Backcountry Hiker, and the Encounters with People threshold in management zones B and OP1 (Keller, R. 2018^{xx}).

Furthermore, the NPS is aware that the number of vehicles allowed on the Park Road in regulation has been surpassed,¹⁴ as well as thresholds set in the 2012 Vehicle Management Plan (Clark, W. C., and Bracher, T. A. 2018xxi). Managing to these existing regulations and thresholds could make promoting more visitor use in the Kantishna and Wonder Lake areas a challenge for park managers. The physical integrity of the state-owned section of the Park Road could also be considered to determine the impact of any additional traffic, such as a shuttle system, on the road. The tonnage capacity of the road could additionally impact access to the area.

Proposed Infrastructure

This document includes a range of potential proposals related to recreation, transportation, and administrative infrastructure as noted earlier in this chapter.

Through additional input and information gathering, the National Park Service will develop a proposed action with specific proposals related to infrastructure.

Visitor Capacity Conclusion

Visitor capacity is the outcome of discussions framed by management direction and existing planning and other guiding documents, a defined analysis area, understanding of current use, desired conditions, indicators and thresholds, limiting attributes, and proposed infrastructure.

Each alternative developed for analysis in a future compliance document will have its own unique capacity for overall visitor use and allocation outcomes for types of visitor use.

¹⁴ 36 CFR 13.932 sets the number of motor vehicle permits issued for the Park Road at 10,512. The 2012 Vehicle Management Plan Record of Decision shows the park's intent to change this regulation to 160 vehicles a day. The park currently authorizes more than 10,512 vehicles a season, but averages less than 160 vehicles per day.

Table 10. Indicators and thresholds from the 2006 *Backcountry Management Plan*.

Management Area	Purpose	Trail and 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	Other?
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 informal trails, campsites	Low 1 encounter/day	No	Low 5%	Medium max % adu/hr: 15 max #/day: 10 max dBA: 40	Medium 2 encounters/day	Yes	Low always able to camp outside of s&s	Low-Medium	Low occasional patrols	
Portal - Major Landing Area*	Provide high-use airplane landing areas that are suitable for both day use and expediting drop-off and pick-up. Seasonal, May-September.	N/A	High 5 encounters/day	Yes	Low 5%	Very High max % adu/hr: 50 max #/day: 50 max dBA: 60	N/A	Yes	High little or no opportunity to camp outside of s&s	High	Medium-High routine visitor contacts - frequently present	
Corridor*	Provide high-use travel routes via group or water that provide access to remote parts of the park and preserve. Year-round or seasonal.	Medium occasional informal trails, campsites	High 5 encounters/day	Yes	Low 5%	High max % adu/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%	High max % adu/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	
OP1	Provide opportunities for day use and overnight wilderness recreational activities that are remotes and require self-reliance in an areas that has limited opportunities for motorized access.	Medium occasional informal trails, campsites	Low 1 encounter/day	No	Low 5%	Lows max % adu/hr: 5 max #/day: 1 max dBA: 40	Medium 2 encounters/day	Yes	Low always able to camp outside of s&s	Medium-High	Medium routine visitor contacts	
Other?												

These indicators and thresholds are pulled from the 2006 *Backcountry Management Plan* (BCMP). The shading is showing the results of the recent NPS managed 2018 Day Hiker Survey. Green shading shows where NPS is in standard. Red shading shows where NPS is out of standard. The darker the red shading the more out of standard the park is with that threshold. White spaces signify that no social science information exists for these units to show if NPS is in or out of standard. “Max % of adu/hr” refers to the percentage of time within an hour that unnatural

sound is heard. “Max dBA” refers to the maximum decibel level, or loudness of a sound. “S&s” is shorthand for “sight and sound.” See the BCMP for further descriptions. The “Other” row and column were used as part of an exercise with NPS staff to determine if additional management zones or indicators needed to be identified as part of this plan. The results of that conversation are noted under *Management Zones and Indicators and Thresholds* subheadings.

PLAN CONCEPTS

Introduction

These concepts are presented to illustrate how the range of potential actions could be grouped together to represent a cohesive vision for the Kantishna and Wonder Lake areas in the future. At this time, the National Park Service is seeking feedback on both potential actions, as well as potential concepts. More information is needed from public comment, surveys, and additional management conversations in order to inform the identification of a proposed action in a future compliance document.

Table 11. Summary of concepts that group potential actions together.

-	Concept A – No Implementation	Concept B – Meet the Basics	Concept C – Contribute the Cultural Resource	Concept D – Optimizing Recreation
Description	This concept illustrates no change in recreation, transportation, or administrative infrastructure.	This concept does the minimum to meet basic needs in Kantishna and Wonder Lake. Those basic needs are to provide safe alternatives to hiking or biking on the Park Road, provide opportunities for experiencing the alpine environment, and provide affordable option(s) for individuals and groups to stay in Kantishna and Wonder Lake, and put no undue risk (geohazards, access/ownership) on the NPS.	This concept emphasizes connection to the cultural landscape and the human stories that used the area in the past.	This concept provides the most recreational opportunities for both day and overnight independent and commercial users.
Visitor Experience	Lodges continue to structure their guests' visits. NPS does not manage visitor expectations or experience beyond what is provided by bus drivers or lodge employees. The day user experience in Wonder Lake continues to include walking the campground and Park Roads.	Provides two full days (three nights) of activity on trail not including transportation days.	Provides three full days (five nights) of activity on trail not including transportation days for day users. Four/five nights can be spent along backcountry trails for overnight users.	Provides four full days (five nights) of activity on trail not including transportation day for day users. Four/five nights can be spent along backcountry trails for overnight users.
Overnight Facilities	Concept A	Concept B	Concept C	Concept D
Rustic Lodging	None	None	None	Could be quinzee, dorm, or lean-to. Sleep up to 12. Shared kitchen space. Co-located with campground.
Roadside Campground	Wonder Lake Campground	Located at Airstrip and Wonder Lake Campground	Expand the existing Wonder Lake Campground.	Located at Friday Creek
Group Camping	None	Located at Airstrip	Located at Wonder Lake Campground	Located at Friday Creek and Wonder Lake Campground

-	Concept A – No Implementation	Concept B – Meet the Basics	Concept C – Contribute the Cultural Resource	Concept D – Optimizing Recreation
Backcountry Campsites	None	None	None	Up to 5 total locations, three sites each, on Taylor and Brooker loops
Wonder Lake Day Use Area	Stays in current form. Undeveloped at lake's edge except for boardwalk	Yes, including boardwalk, picnic tables, bathrooms	Yes, including boardwalk, picnic tables, bathrooms	Yes, including boardwalk, picnic tables, bathrooms, and shelter
Transportation from HQ to Kantishna/Wonder Lake	Concept A	Concept B	Concept C	Concept D
Commercially Supported	Transit bus, tour bus, camper bus, air taxi	Transit bus, tour bus, camper bus, air taxi, larger planes for air taxi contract/CUA	CUA operated vehicle, lodge bus, transit bus, tour bus, camper bus, air taxi	CUA operated bus, lodge bus, transit bus, tour bus, camper bus, air taxi
Private Vehicles	No change	More private planes	No change	No change
Independent Visitor	Transit bus, camper bus, air taxi	Larger planes for air taxi contract/CUA	Transit bus, camper bus, air taxi	Transit bus, camper bus, air taxi
Packaged Tour	Lodge bus, tour bus	Air taxi contract/CUA, vehicle at airstrip	CUA operated vehicle, lodge bus, tour bus	CUA bus, lodge bus, tour bus
Road Based	Lodge bus, transit bus, tour bus, camper bus	No change	CUA operated vehicle, lodge bus, transit bus, tour bus, camper bus	CUA bus, lodge bus, tour bus, transit bus, tour bus, camper bus
Flight Based	Air taxi	Larger planes for air taxi contract/CUA	Air taxi	Air taxi
Transportation within and between Kantishna and Wonder Lake	Concept A:	Concept B:	Concept C:	Concept D:
Commercially Supported	Lodge bus for their guests only	CUA leave vehicles at the airstrip	CUAs travel in own vehicles, shuttle bus offered	CUA use current transportation system or shuttle bus with CUA/camping pass
Private Vehicles	No change	No change	No change	No change
Independent Visitor	Current transit and camper buses	Current transit and camper buses	Shuttle bus	Shuttle bus
Packaged Tour	No change	CUAs leave vehicles at the airstrip	No change	Shuttle bus
Road Based	No change	CUA vehicle, transit bus, camper bus	CUA vehicle, shuttle bus, transit bus, camper bus	Shuttle bus, transit bus, camper bus
Flight Based	None	None	None	None

-	Concept A – No Implementation	Concept B – Meet the Basics	Concept C – Contribute the Cultural Resource	Concept D – Optimizing Recreation
Infrastructure	Concept A:	Concept B:	Concept C:	Concept D:
Formal Trails	3 miles	25 miles	40 miles Includes backpacking loops	80 miles Includes bike trails and backpacking loops
Trailheads	1 Trailhead	7 Trailheads	7 Trailheads	11 Trailheads
Biking	None	None	None	Allowed on Ditchline Trail and on access routes. Bike storage offered at visitor nodes.
End of the Road	Current alignment	Current alignment; airstrip fenced in	Park Road ends at Gallop Cabin	Park Road ends at Gallop Cabin
Administrative Facility	No change	Moose Creek Site (5)	Airstrip (6); Wonder Lake Ranger Station (7); WLCG (8)	Moose Creek Site (5)
Transit Bus Turnaround/ Bus Depot	None	None	Dalle Molleville	North Face Parking Lot
Transportation Support	None	Wider airstrips; more airplane parking; parking at airstrip and trailheads	Parking at trailheads; bus parking; wash/fuel station; bus driver sleeping quarters	Bus parking; wash/fuel station; bus driver sleeping quarters

Concept A – No Implementation

If the park chooses not to implement any element of the range of proposals Wonder Lake would continue to be a favorite pristine destination of park visitors. The day user experience would continue to consist of a few photos, a walk to the bathroom, and re-boarding their bus within 15 minutes. The Wonder Lake Campground would continue to operate near capacity with 28 sites, and dispersed backcountry camping would continue to be permitted in units 15 and 36.

Kantishna visitors would continue to enjoy exceptional service at one of the several private lodges as well as guided hiking on an informal trail system. The piecemeal trail system would continue to serve visitors on a combination of stable informal trails, informal trails in unsustainable alignments resulting in resource damage, and use of the Park Road as a trail. Dispersed backcountry camping would continue to be permitted in units 41, 42, and 43.

Guided hiking contracts would transition to CUAs without visitor capacity limits vetted by the NEPA process. This could result in the park needing to do this process separately, or using a potentially less-defensible method to determine commercial limits. The Primitive Recreation Extent Necessary Determination would likely be completed providing some guidance for limiting commercial operations in designated and eligible wilderness.

The number of overnight visitors spending multiple days in the area would likely increase with new lodges opening in the next several years.

Concept B – Meet Basic Needs

This concept considers the minimum to meet the basic needs in Kantishna and Wonder Lake. With this proposed infrastructure visitors will have the option to spend two full days (three nights) exploring on-trail hiking opportunities.

The Wickersham Loop provides easy access to alpine hiking with views of the Alaska Range and Kantishna Hills, and an opportunity to view historic mining relics.

The Washburn Trail provides a short hike with incredible sweeping views for day or campground users.

The McKinley Bar Spurs allow campground and day users to access the McKinley Bar Trail through tundra mats full of berries instead of on the access road, or can provide an alternative short loop hike.

Connecting the Wonder Lake Ranger Station with the Kantishna Airstrip via the Blueberry Hill Trail, Wonder Lake Backcountry Trail, and Ditchline Trail would remove visitors from using the narrowest part of the Park Road as a trail and allow interpretive opportunities following the historic ditchline. This option would also maintain the pristine views of Wonder Lake and the Alaska Range from the Kantishna ridgetops by not constructing a trail on the east side of the lake.

Backcountry permits would continue to be permitted in units 15, 26, 41, 42, and 43. The Wonder Lake Campground would serve both individuals and groups in Wonder Lake, and an Airstrip Campground would provide up to 10 campsites to serve individuals and groups wanting to stay in Kantishna.

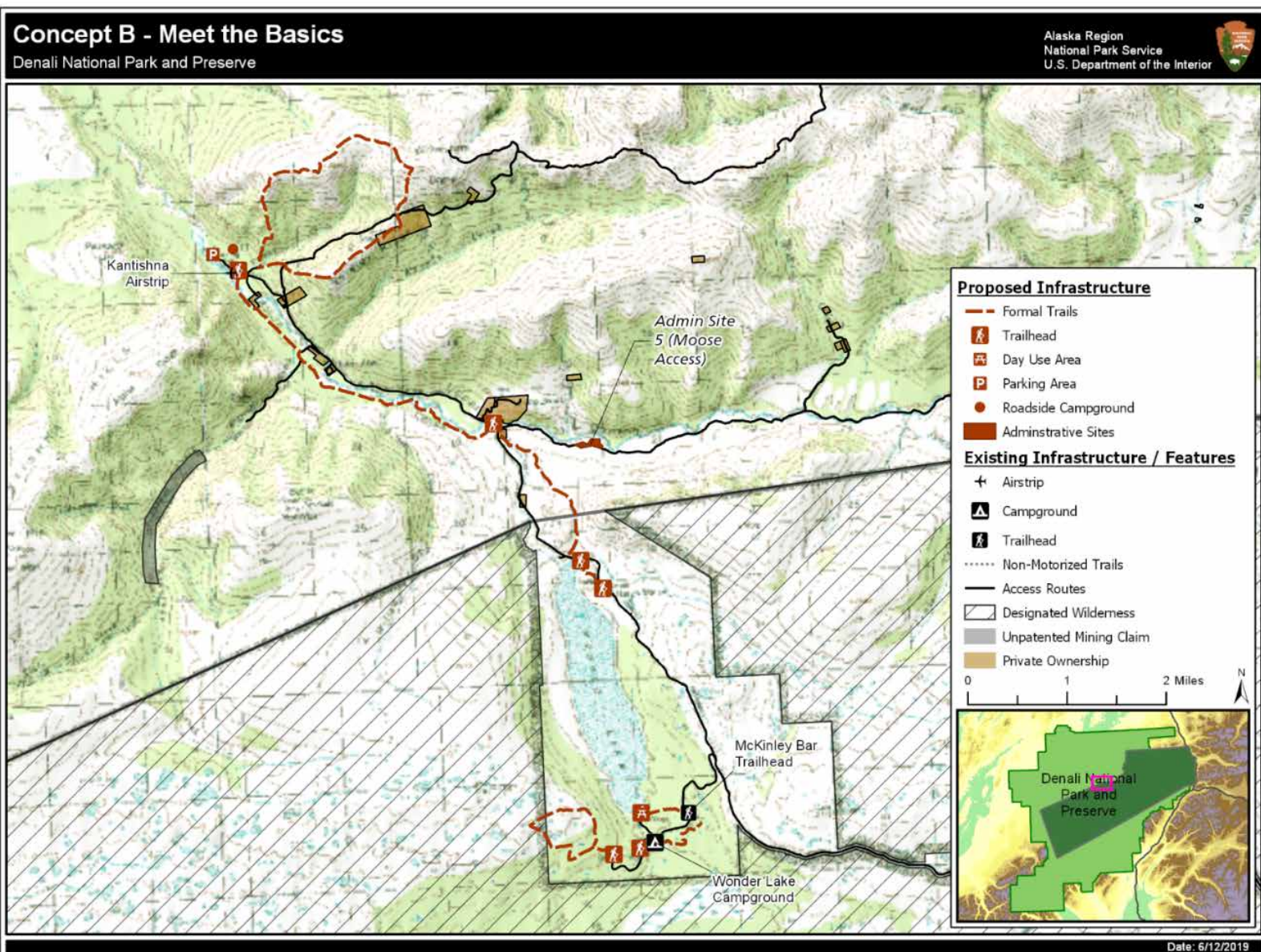


Figure 34. Map illustrating Concept B "Meet the Basics."

Concept C – Contribute to the Cultural Landscape

This concept recreates portions of a trail system that contributes to the significant period of the cultural landscape. At least a portion of each trail has a history that can be told. With this infrastructure in place, visitors would be able to explore on-trail for three full days (four nights). Additional nights could be spent backpacking the two designated backpacking loops.

The culturally significant trails cater towards the independent use, and contribute to improving visitor flow between Kantishna and Wonder Lake. This includes a trail (Summer Route/Ditchline Trail) that connects the Wonder Lake Campground to the Kantishna Airstrip.

Trails that have a negative impact on the cultural landscape and some of the most quickly degrading trends would be closed and rehabilitated. This would impact lodge guests that frequent the Wickersham Loop and Cloudberry Trails.

Independent and commercial backpacking would be supported as a growing opportunity along the Brooker and Taylor Loops. Camping would be dispersed ½ mile from the trail. Pedestrian bridges or hand trams would be provided across Moose Creek to reduce

concerns with crossing a highly variable creek on formal trails.

The Wonder Lake Campground would be expanded by up to 10 additional campsites, including a group camping option. Improved transportation between Kantishna and Wonder Lake would negate the need for an additional roadside campground in Kantishna.

Visitors would be able to travel between visitor nodes in Kantishna and Wonder Lake by a shuttle bus loop. Transit bus users would be dropped at a bus depot located at Dalle Molleville where a shuttle bus could pick them up and continue the remainder of the way to Kantishna.

Offices and residences for staff would be provided behind the Wonder Lake Ranger Station. This may require a new access road. Maintenance facilities would be provided at the Kantishna airstrip. These administrative facilities are supported by the Cultural Landscape Report. Additionally, sleeping quarters for both the campground host and bus driver would be maintained in the current location at the Wonder Lake Campground. The Friday Creek administrative site would be dismantled and rehabilitated.

This concept could provide an additional 70 visitors to overnight in Wonder Lake at a designated facility.

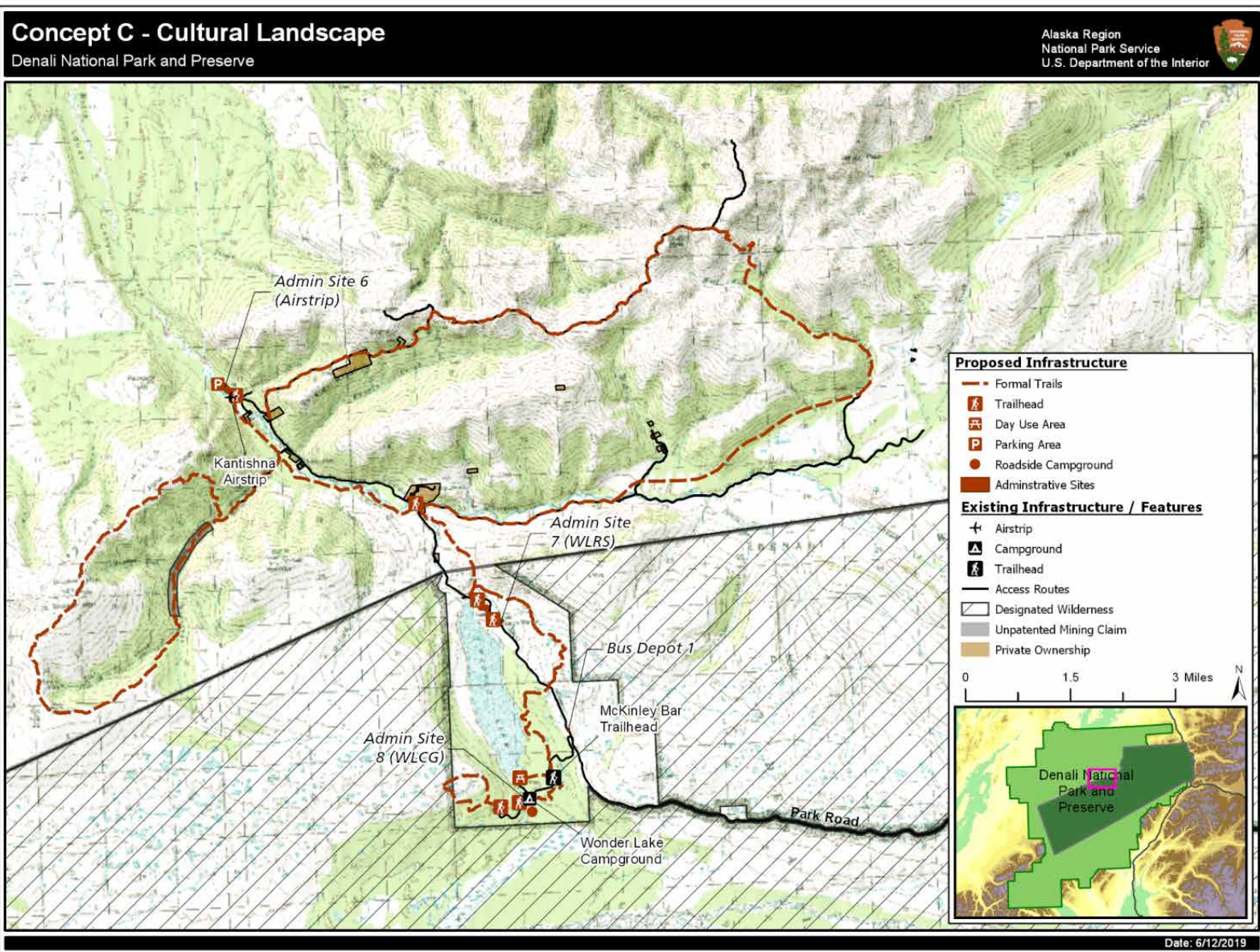


Figure 35. Map illustrating Concept C "Contribute to the Cultural Landscape."

Concept D – Optimize Recreation

This concept would offer the upper limit of recreational, transportation, and administrative facility infrastructure. It would create the widest breadth of recreational opportunities in the Kantishna and Wonder Lake areas that serve both day and overnight independent and commercial users.

Visitors would be able to explore for four full days (five nights) on day use trails, as well as five or more nights at designated backcountry campsites.

The Brooker and Taylor Loops would include pedestrian bridges to allow visitors to cross Moose Creek. Up to two backcountry campsites, sleeping up to 12 people, could exist on the Brooker Loop, and up to three backcountry campsites, sleeping up to 12 people, could exist on the Taylor Loop.

Other trails would meet the basic needs discussed in Concept B, as well as improve visitor flow. The Summer Route and Ditchline Trail would serve as a pedestrian thoroughfare to connect the Wonder Lake Campground and Kantishna Airstrip. The Summer Route on the east side of Wonder Lake would provide a spectacular day hike for Wonder Lake Campground and Day Use users to visit the Wonder Lake Ranger Station and connect with NPS staff.

The Ditchline Trail would function as a multi-use trail allowing visitors an opportunity to bike off the Park Road or access routes. Pedestrian bridges at Eldorado and the airstrip could provide a bicycle and handicap accessible loop, or a hand tram could be installed on one end to encourage out and back bicycle use of the trail, instead of potentially unsafe bicycle use on the Park Road.

Bike use would be encouraged generally with parking and storage options provided at visitor nodes.

The Friday Creek Campground would provide up to 10 campsites to serve individuals and groups wanting to stay in Kantishna. Rustic lodging for up to 12 would be co-located with the campground as an alternative affordable lodging option.

A shuttle system would operate between Kantishna and the Eielson Visitor Center allowing visitors to move more freely on the west end of the park. The bus depot would be located at the North Face Parking Lot, where visitors could exit a transit bus and board a loop shuttle bus.

Administrative facilities would be consolidated about a mile up the Moose Creek access route on an approximately 10-acre site. This would include housing for NPS, concessions staff, and researchers, and office space and maintenance facilities. Administrative facilities at Friday Creek would be dismantled and rehabilitated. The administrative facilities at the Wonder Lake Campground would be repurposed as a group camping site.

This concept could allow an additional 140 visitors to stay overnight at a designated facilities in the Kantishna area.

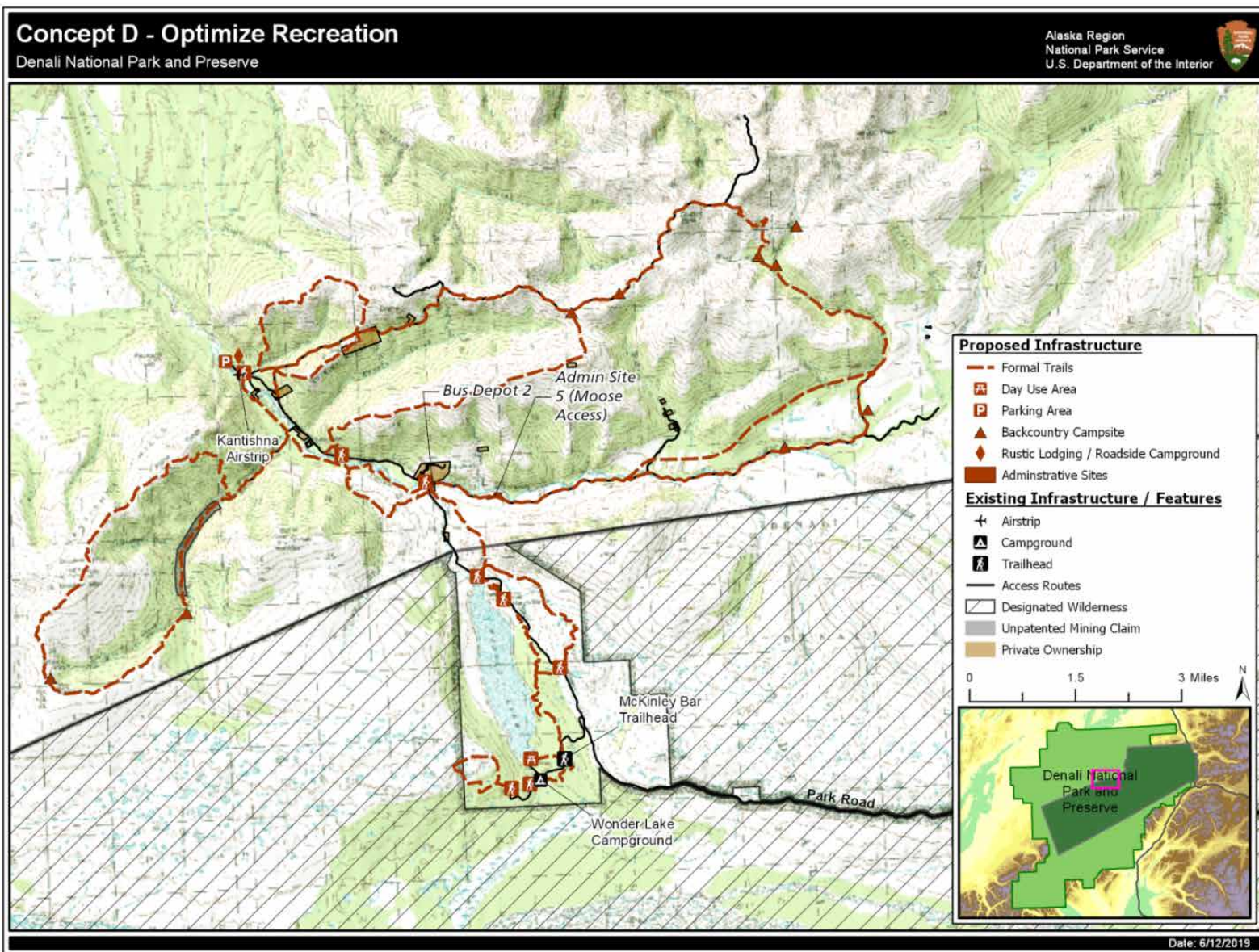


Figure 36. Map illustrating Concept D "Optimize Recreation."

CHAPTER 3. IMPLEMENTATION

INTRODUCTION

For long-term plan implementation, the NPS would consider the need for prioritizing and phasing projects, addressing key issues, determining effective monitoring and adaptive management tools, and management of current informal trails until environmental compliance is completed. This chapter represents the park's next steps into the project management phase of this plan. This chapter is the culmination of discussions in Chapters 1 and 2.

PROJECT PHASES

Planning and Compliance

The NPS acknowledges that more data is needed to make management decisions on management and development in the Kantishna and Wonder Lake areas. Below is an outline of those next steps.

Phase 1

- This *Kantishna and Wonder Lake Area: Range of Proposals for Public Feedback* released to the public for comment
 - *Public engagement: Members of the public will have an opportunity to provide feedback on the document. Comments will be consolidated into a summary document and will be considered and incorporated as appropriate into future phase.*
- Potential areas for development are flagged for survey and analysis (trails, campgrounds, admin sites, day use area, bus depots, trailheads)
- Modeling completed for shuttle and transit systems on the Park Road, and encounter rates on trails
- Data collection and monitoring continues as needed

Phase 2

- Detailed information collected on the cost of construction and maintenance of all proposed facilities will be compiled, evaluated, and considered by NPS management in developing a proposed action

- *Public engagement: The results of this consolidation will be shared with members of the public and included as an appendix to the future plan / compliance document.*
- Wetland delineations, cultural resource surveys, and bird surveys are completed in flagged areas
- Data collection and monitoring continues as needed

Phase 3

- NPS reviews contractor collected data and reports
- The formal environmental compliance process begins
 - *Public engagement: Comments made by the public will be used as part of initial scoping for a compliance document.*

Phase 4

- Compliance process is completed
 - *Public engagement: Members of the public will have an opportunity to provide comments on the plan and compliance document. Comments will be considered, and substantive comments will be responded to before a decision document is signed.*
- Complete engineering plans for administrative site and bridges, if needed
- Update projects to seek funding

RESOURCE ISSUES

The following concerns have been noted by staff and stakeholders as resource issues that may occur as a result of implementing the Plan. The National Park Service would take these potential resource issues into consideration when planning project phasing, implementation, and long-term management.

Cultural Resources

- Encouraging visitor use of the Kantishna Hills without interpreting the cultural resources could lead to looting and vandalism of those resources.
- Development of new facilities (trails, campgrounds, etc.) could negatively affect cultural landscapes and National Historic Register nominations.
- Moving the end of the road to address safety concerns on the airstrip could have a negative effect on the Park Road historic district.

Geologic

- Compaction and use of newly exposed ground could cause a geo-hazard event, or cause the landscape to warp and require maintenance intervention.

Vegetation

- Any new development from the Park Road could increase the spread of exotic species into new areas of the park.
- Additional use on Quigley and Friday ridges could increase probability of trampling and destroying sensitive lichen and other rare plant populations.

Viewscales

- Additional infrastructure in the Wonder Lake area could further detract from views of the Alaska Range and Denali.

Water

- Not offering toilets at developed backcountry campsites increases the risk that the few water sources that do exist could be contaminated by human waste.
- Water sources on alpine ridges can be difficult to locate. They may appear and disappear throughout the season.
- Heavy metals exist in many water sources. This is due to both a natural presence of these metals and the history of mining.

Wetlands

- New trails may damage wetlands, but required mitigation could fund stream reclamation projects.

Wilderness

- Construction of the Washburn Trail and Brooker Loop would degrade wilderness character.
- Portals increase access to a specific management zone but sound impacts degrades the natural character of the surrounding wilderness.

Wildlife and Avian

- New trails and developed camping could disturb wildlife and bird behavior.
- Constructing a trail, encouraging predictable routines, and an accumulation of smells could attract wildlife to an area. Trails increase the number of bear-human interactions as bears like to travel on trails and humans are less vigilant when hiking on a trail.

OPERATIONAL CONCERNS

The following concerns have been noted by staff and stakeholders as operational concerns that may occur as a result of implementing the Plan. The National Park Service would take these potential concerns into consideration when planning project phasing, implementation, and long-term management.

Shared Access

- Pedestrian and vehicle shared use of access routes may not be a desirable visitor experience.

Commercial Opportunity

- Rustic lodging would only be feasible if done as part of a concession contract.
- The current air taxi contract doesn't allow for additional landings if the Kantishna airstrip becomes a portal.

Housing

- Temporary housing is needed for staff during field surveys and construction.
- Long-term year-round housing is needed for operational staff.
- Housing is needed for bus, and potential shuttle system, drivers.

Infrastructure

- Additional airplane and vehicle parking may be needed at the Kantishna airstrip.
- Increasing use of the area may encourage visitation to the SNOTEL station, climate reference network monitoring station, communication tower and private property in Kantishna.
- Up to 80 miles of new trail would need to be maintained.

Management

- Any increase in traffic to Kantishna would have impacts at rest stops, wildlife stops on the entirety of the road.
- Installing backcountry campsites sets precedent in the park.

Monitoring

- Management needs a way to regularly monitor and adaptively manage use prior to impact occurring.

Safety

- Moving the end of the road loop to the Gallop Cabin would reduce the risk of transit and tour buses needing to cross Friday Creek, and would keep visitors off of the airstrip.
- There could be user conflict in the Kantishna Hills during subsistence hunting season.
- There is a safety concern on the narrow state road with increased visitor and vehicle traffic.

Staffing

- Currently day use is at Toklat and Eielson and overnight use is in Wonder Lake. If NPS adds day and overnight recreation in Kantishna, more staff may be needed to cover that area for all hours of the day.

Transportation

- A new shuttle loop would impact the Vehicle Management Plan standards if it travels east of the old park boundary.
- Additional staffing, services, and infrastructure may be needed at the Eielson Visitor Center if it is included as a shuttle stop from Kantishna.

MONITORING AND ADAPTIVE MANAGEMENT

The *2006 Backcountry Management Plan* offers methods and timelines for monitoring that could be adopted by this plan.

Additional monitoring needs include impacts to cultural resource sites near visitor infrastructure. Annual commercial operator reporting could also be included in monitoring reports.

Indicators, thresholds, and monitoring schedules could be developed for the Backcountry Day Use and proposed Backcountry Overnight management zones.

Adaptive Management could include:

- An annual rotation of trails that could be used commercially. These could be included in CUA stipulations. Additionally, some trails could be for independent use only, such as the connection trail (Summer/Ditchline trail).
- Providing specific times trails can be utilized by commercial groups based on pulses in independent visitation. These could be included in CUA stipulations.
- Regular trail closures to reduce developing resource damage or impacts from spring-time thaws.
- Trail closures used as needed to protect natural wildlife processes and reduce negative human-wildlife interactions.
- A minimum night stay at the Wonder Lake or Kantishna Campground could be a way to reduce length of stay in other areas of the park, and the number of people traveling the road to access the area.

- Use a Memorandum of Understanding (MOU) with Kantishna lodges to monitor and maintain informal trails.

Informal Trail Management

Resource Damage from Informal Trailing

Animal- and human-created informal trails with varying degrees of erosion are an impact to the landscape. Repeated use by humans could be further controlled on these trails.

In the Kantishna and Wonder Lake areas approximately 17.8 miles of informal trails have been surveyed and scored based on condition, characteristics, use level, and other attributes. 2.17 miles of these trails were considered to be a high concern and priority for treatment. 14.59 miles were considered to be of medium concern and secondary priority for treatment. 1.04 miles are considered to be a lesser concern and third priority for treatment.

Monitoring Process

The NPS drafted a proposed process to address informal trails. The process builds on access management tools and a decision guide for [informal] trail formation provided in the 2006 *Backcountry Management Plan*. It acknowledges the need for these tools to be used in conjunction with informal trail monitoring and reporting system. The proposed process is under review and will go through compliance and be part of a future NEPA document.

Public Comment Requested: Decision on Classification of Informal Trails in Kantishna and Wonder Lake may occur at the closing of the 30-day comment period for this public engagement document.

Proposing Class 2 Trails

The National Park Service proposes to classify the existing informal trails named in this document as Class 2 trails (see Appendix A for description) using a categorical exclusion at the closing of the 30-day comment period on the draft Plan. The park does not intend to advertise these trails to the public, or do major construction on these trails, but recognizes that they are regularly used by visitors in the area, and are authorized by NPS for guided hiking. Classifying them will allow the park to create a uniform name for each trail (advantageous for reporting purposes) and do basic maintenance on trails if it is needed.

Trails or trail segments included:

Anderson, Brooker/Alpha, Camp Ridge, Cloudberry, Cranberry Ridge, Friday/Quigley, McKinley Bar Spurs, Reflection Pond, Ridge Walkabout, Taiga, Washburn, and Wonder Lake Backcountry.

This classification would remain in place until compliance is completed on the project as a whole and the park has direction to construct or rehabilitate trail segments.

The constructed trails would become formal advertised trails once they are constructed.

Trails not included in this list include Busia, Eureka, Jauhola, Caribou Creek, Yellow Creek, Slate Creek. These areas of former impact would be recommended for closure or rehabilitation.

Additionally, Skyline Drive access route, Eldorado Creek access route, Moose Creek access route are not included in this list as they would be managed as Corridors, or motorized trails.

The Summer Route, Ditchline Trail, and portions of the Brooker and Taylor Loops are also not included in this list because they would be new construction.

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APPENDIX A: TRAIL CLASSIFICATION TABLE

Table 12. Denali National Park Trail Classification System.

Trail Attributes	Trail Class 1	Trail Class 2	Trail Class 3	Trail Class 4	Trail Class 5
Tread and Traffic Flow	User-created trail or game trail. May require route finding. Native materials only.	Constructed tread 18"-36" of native materials when possible.	Constructed tread 24"-48" of native and imported materials.	Constructed tread 36"-72" wide of compacted gravel. Designed to meet Accessibility Standards.	Constructed tread at least 60" wide of a hardened surface such as asphalt. Designed to meet Accessibility Standards.
Obstacles	Obstacles common. Narrow passages, brush, steep grades, rocks and logs present. Downed trees and vegetation cleared from trail corridor.	Obstacles occasionally present. Downed trees and vegetation cleared from trail corridor.	Obstacles present only to insure proper drainage. Vegetation cleared from trail corridor.	No protrusions higher than 2" and no gaps wider than 1/2". Grades typically <5%. Vegetation cleared from trail corridor.	No protrusions higher than 2" and no gaps wider than 1/2". Grades typically <5%. Vegetation cleared from trail corridor.
Constructed Features	No constructed features.	Structures protect trail infrastructure and resources. Drainage is functional.	Retaining walls, steps, turnpike, etc. may be substantial. Trail bridges at water crossings.	Drainage structures frequent, may include road-like designs. Trailside amenities may be present.	Drainage structures frequent, may include road-like designs. Trailside amenities may be present.
Signs	Minimum required.	Signs for basic direction.	Directional signs as needed. Informational and interpretive signs outside of Wilderness.	Wide variety of directional and interpretive signs.	Wide variety of directional and interpretive signs.

GLOSSARY

Acronyms

ABA – Architectural Barriers Act

CUA – Commercial User Authorization

FONSI – Finding of No Significant Impact

MRA – Minimum Requirement Analysis

NPS – National Park Service

ROD – Record of Decision

Definitions

Commercial/Guided Visitor – A visitor that experiences the park with a hired guide or service.

Cultural Landscape – A geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or aesthetic values. There are four non-mutually exclusive types of cultural landscapes: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes.

Designated Backcountry Campsite – A location at least one-half mile from the Park Road that has tent pads, food storage, and a backcountry toilet.

Desired Condition – A park’s natural and cultural resource conditions that the National Park Service aspires to achieve and maintain over time, and the conditions necessary for visitors to understand, enjoy and appreciate those resources. These conditions are identified through a park’s planning process.

Formal Trail – A trail that is planned, maintained, and publicized to visitors. These trails follow national trail standards.

Independent Visitor – A visitor that experiences the park without hired guides or services.

Indicator – A specific resource or experiential attributes that can be measured to track changes in conditions so that progress toward achieving and maintaining desired conditions can be assessed.

Informal Trail – Human- or animal-created trail/path that developed informally from use and is not designated or maintained by the park. These trails may be known by the park, but not maintained, or publicized to visitors. These trails do not comply with national trail standards.

Inholder – A private entity that owns land or mining rights on land wholly or effectively surrounded by the park. The private property is referred to as an *inholding*.

Kantishna Area - The New Park Backcountry Day Use area and backcountry units 41, 42, and 43. Mile 88 to 92 of the Park Road travels through this area.

Maintainable Trail – Formal trails that receive maintenance but may not be in the most sustainable location.

Node – An identified area of concentrated visitor use used to access the park’s backcountry.

Off-Trail – Moving overland without the use of a formal trail.

Private Vehicle – Any non-government vehicle permitted to be on the restricted portion of the Park Road (inholder vehicles, professional photographers, administrative use, disability permits, contractors, etc).

Quinzee – A small temporary structure with a sloped roof that sleeps two to four people and may include a wood stove for heating.

Shuttle Bus – Buses that offer free rides to visitors in the unrestricted frontcountry of the park. Currently, shuttles operate between the park entrance and park headquarters or the Savage River rest stop.

Sustainable Trail – Construction of infrastructure in a manner that lessens the possibility of resource damage and high maintenance costs.

Tour Bus – Buses that offer trips into the park including food, beverages, narration from a guide, and for some tours, a presentation with an NPS interpretive ranger.

Threshold – The minimum acceptable condition for an indicator. Generally, if conditions approach the minimally acceptable threshold, the NPS would take actions to prevent the threshold from being exceeded.

Trail Classification – A national standard that specifies construction and maintenance of a trail dependent on the desired condition. Denali has modified the trail classification table in Appendix A to describe trail maintenance in the park.

Transit Bus – Buses that offer visitors transportation to locations along the Park Road.

Type 1 Concessioner – This concessioner manages transportation for the park, including tour, transit, and shuttle buses. The 10-year contract is currently held by DOYON – Aramark Joint Venture also referred to as “JV.”

Visitor – Anyone who physically visits a park for recreational, educational, or scientific purposes.

Visitor Capacity – A component of visitor use management and is the maximum amounts and types of visitor use that an area can accommodate while achieving and maintaining the desired

resource conditions and visitor experiences that are consistent with the purposes for which the area was established.

Visitor Experience – The perceptions, feelings, and reactions that a visitor has before, during, and after a visit to an area.

Visitor Use – Refers to the human presence in the park for recreational purposes, including education, interpretation, inspiration, and physical and mental health.

Visits – The quantity of times the park is visited. One visitor may be counted three times if coming to the park three days in a row.

Wilderness (designated) – Federal land that has been designated by Congress as a component of the National Wilderness Preservation System.

Wilderness (eligible) – Federal lands that have been found to possess wilderness character based on the criteria specified in the Wilderness Act, and have been formally determined “eligible” for future wilderness study.

Wilderness (ineligible) – Federal lands that have been found not to possess wilderness character based on the criteria specified in the Wilderness Act, and have been formally determined “ineligible” for future wilderness study.

Wonder Lake Area - The Old Park Backcountry Day Use Area, and backcountry units 15 and 36. Mile 83.6 to 87.9 of the Park Road travels through the Wonder Lake Area.

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