

National Park Service
U.S. Department of the Interior

Katmai National Park and Preserve
Alaska Region



Brooks Campground Trail Relocation

Environmental Assessment

October 2018





As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to assure that their development is in the best interests of all. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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You may also comment for this project online using the Planning, Environment, and Public Comment (PEPC) system at <http://parkplanning.nps.gov>. Retrieve "Brooks Campground Trail Relocation (70169)" to provide comments electronically.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. You can ask us to withhold your personal identifying information from public review, but we cannot guarantee that we will be able to do so.

ON THE COVER

Dumpling Mountain Trail in Katmai National Park used the same methods as proposed for the trail relocation project at Brooks Campground: 4 feet wide and 5 inches deep with honeycomb-like geo-cells filled with compacted gravel to create a hardened surface. Photo Credit: Student Conservation Association (SCA 2017).

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1 Proposed Action

The National Park Service (NPS) is considering creating a new alignment for the Brooks Campground Trail that connects the Brooks Camp operational area to Brooks Campground at Katmai National Park and Preserve (Figure 1). The new trail alignment would be routed inland from the current trail and the northern section would travel in proximity of an existing above ground water line that provides potable water to the campground. The proposed trail would originate near the NPS Ranger Station at Brooks Camp and would deliver visitors to the South Gate at Brooks Campground (Figure 2). The new trail would be approximately 1,000 feet long, 4 feet wide, and 5 inches deep, with two spurs each spanning approximately 150 feet in length with the same width and depth. The trail would be constructed using geo-cells filled and covered with compacted gravel. This would create a hardened trail surface that would be compliant with the Americans with Disabilities Act and Architectural Barriers Act standards for accessibility. In addition to the main trail corridor, the two trail spurs that would be constructed would stem off the main trail and terminate near the Naknek Lake shoreline. The current trail that provides access to Brooks Campground would be abandoned in place and allowed to return to a natural condition upon completion of the new trail.

2 Purpose and Need

The NPS action is needed because the current trail alignment along the Naknek Lake shoreline tends to place visitors in an area of high bear concentration. Bears typically use the beach along Naknek Lake for traveling north and south through the area but also frequently come inland and use the current trail system, especially when there are high water periods on Naknek Lake. Visibility along the current trail is also reduced due to the dense growth of alder that colonize the upper limits of the beach which makes unexpected bear encounters more likely along the current trail. This puts wildlife and people in close proximity and creates a risk of undesirable encounters between bears and humans. The completion of this project would enable the park to move visitors out of an area of high bear concentration. The project would increase accessibility to the campground and allow more reliable access for rangers and other personnel should there be an emergency. The new trail alignment would move the trail approximately 50 yards inland from the Naknek Lake shoreline which is the recommended safe distance for visitors to keep away from bears within the park (NPS 2006).

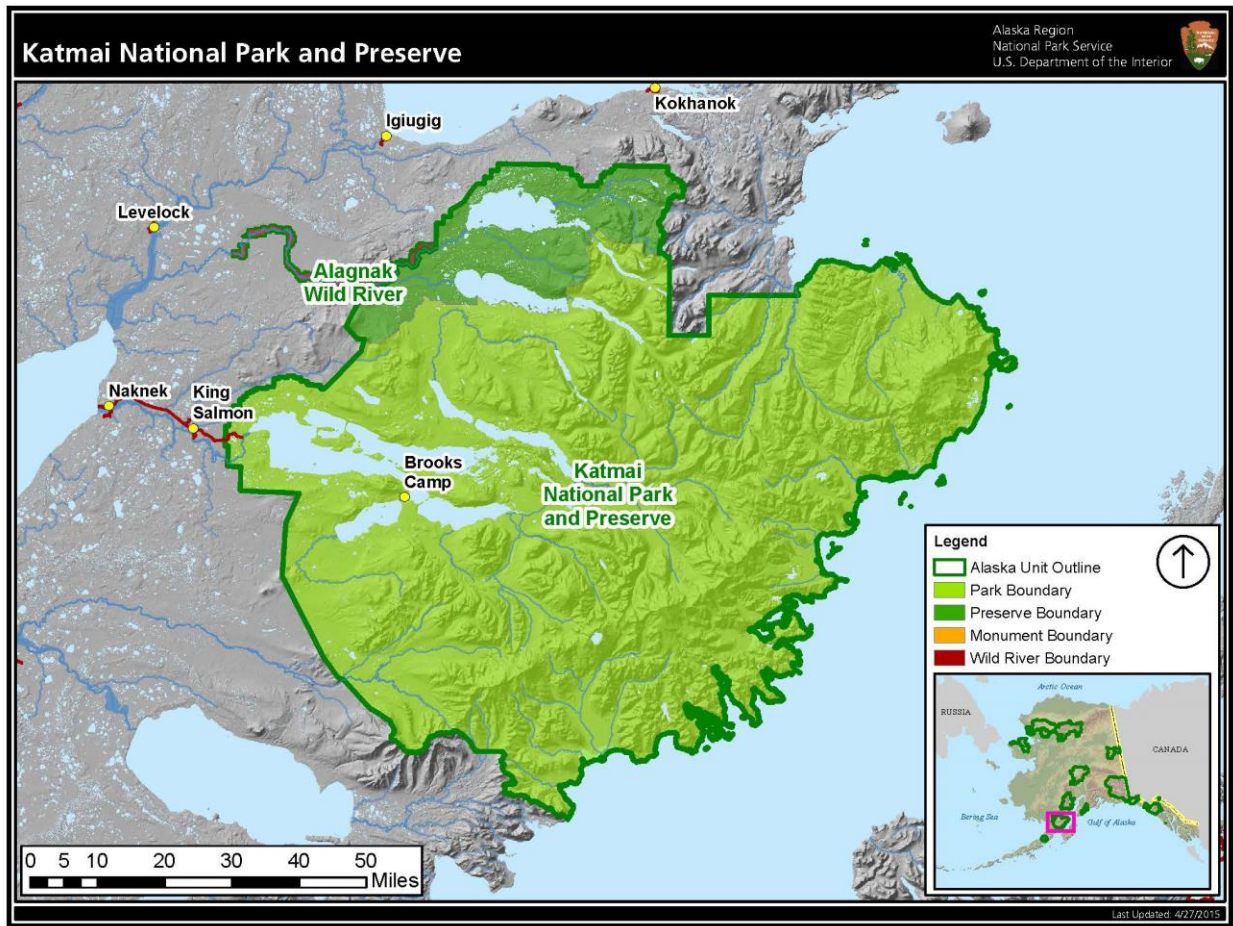


Figure 1: Location of Brooks Camp within Katmai National Park and Preserve

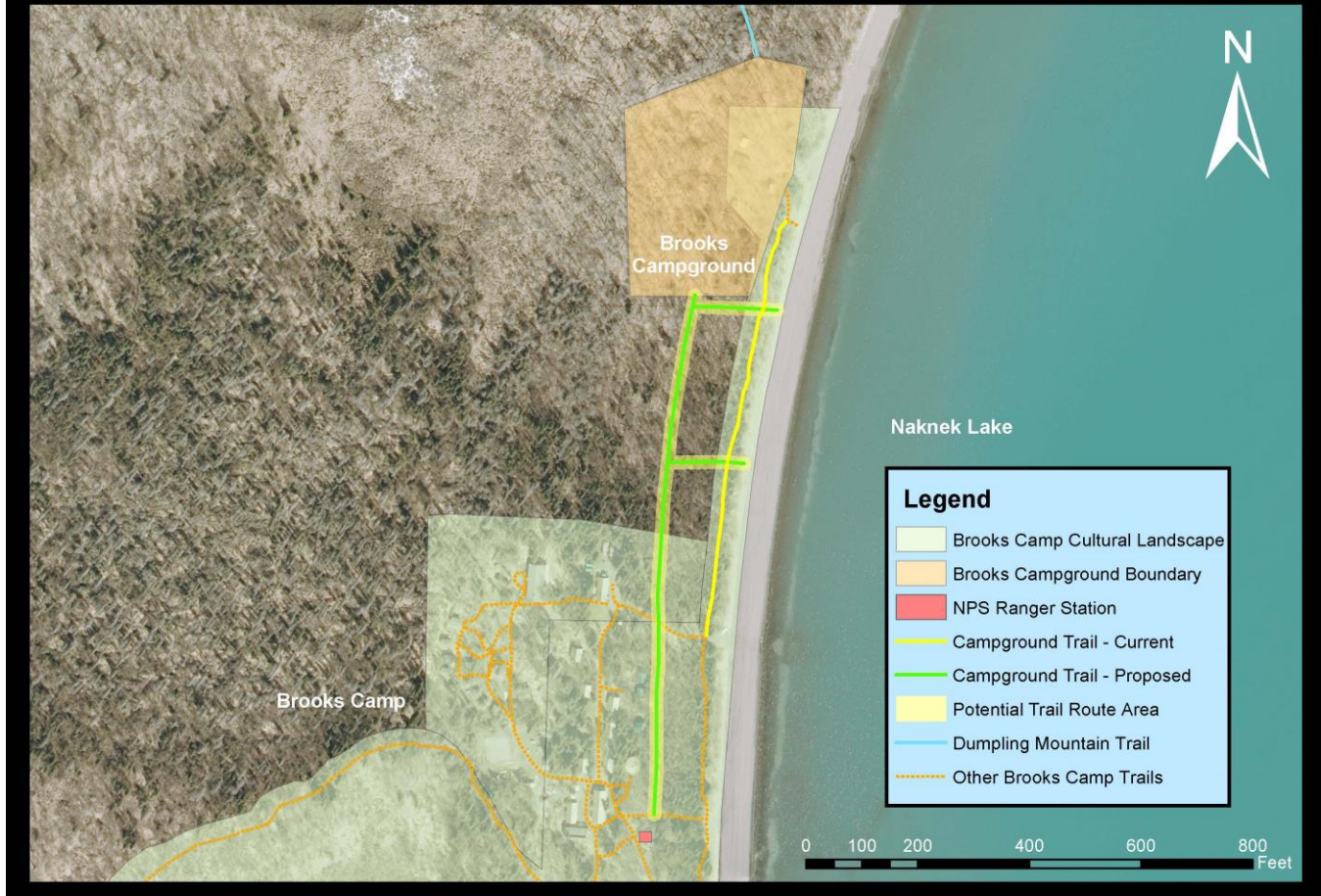


Figure 2: Location of Brooks Campground Trail proposed realignment project in Katmai National Park and Preserve

3 Issues

Issues Selected for Detailed Analysis

The following issues will be evaluated for each alternative:

Vegetation and Soils: This project would impact approximately 6,500 square feet of vegetation (less than 0.2 acres). The vegetative understory consisting of willow species and alder, as well as high bush cranberry, Labrador tea, bluegrass, blue joint grass, and other low shrubs would be cleared and 5 inches of top-soil (2,100 cubic feet) would be removed and replaced with a compacted gravel surface. Small diameter spruce and birch trees in the project area would be removed to clear access for the new trail location. The current Brooks Campground Trail is located would be abandoned in place and allowed to return to a natural condition after installing the new trail. The area of the proposed new trail is comparable to the area of the proposed abandoned trail.

Wildlife: The project area is within critical brown bear habitat. The proposed project has the potential to impact brown bears that are moving along the Naknek Lake shoreline corridor by disrupting their natural behavior and movement patterns during the construction period of the new trail. The current trail that connects visitors to the Brooks Campground is often used by traveling bears especially when there are high water periods on Naknek Lake creating a safety hazard for both bears and people. However, impacts to brown bears would diminish over time as the current trail alignment to Brooks Campground would be abandoned in place and allowed to return to a natural condition.

Cultural Landscapes: The proposed project area is located within the Brooks Camp Cultural Landscape and the Brooks River Archeological District National Historic Landmark Cultural Landscape. The Brooks Camp Cultural Landscape is significant under Criterion A for its contributions to the broad patterns of regional history in the areas of entertainment-recreation and conservation. The period of significance extends from 1950 to 1968. The Brooks Camp Cultural Landscape is a component landscape of the parent landscape Sport Fishing Camps of Katmai National Park and Preserve that includes Kulik, Nonvianuk, Grosvenor, and Battle Lake camps. Cultural Landscape Inventories are used to document landscape characteristics such as views, vegetation, visitor experience, and circulation patterns that were in place during the period of significance. The Brooks Campground Trail is identified as a contributing feature in the 2011 Cultural Landscape Inventory for its significance to the historic circulation pattern of Brooks Camp. The proposed action (to abandon the current Brooks Campground Trail in place, create two perpendicular spur trails accessing Naknek Beach, and create a new southern portion of the Brooks Campground Trail crossing the extant Generator and the Ranger Station Trails) would constitute an adverse effect to the Brooks Camp Cultural Landscape, per Section 106 of the National Historic Preservation Act.

Visitor Use and Experience: Visitors using the Brooks Campground may be impacted during trail construction by temporary exposure to machinery noise, increased activity from work crews in the area, and possibly from dust that would be created during the new trail construction period. Visitors using the campground, those staying at the lodge and day visitors who access Dumpling Mountain Trail, as well as visitors who are loading or unloading onto float planes parked along the Naknek Lake shoreline, could also potentially be affected by construction activities generated from this project. Visitor safety would be improved from the realignment of the trail as people are separated from an area of high bear concentration. The current trail travels along the Naknek Lake shoreline and periodically offers visitors views of the Lake, these views would no longer be possible along the new alignment of the Brooks Campground Trail.

Issues Considered but Dismissed

The following issues were identified, considered, and dismissed from further analysis:

Brooks River Archeological District National Historic Landmark: The proposed project area is within the Brooks River Archeological District National Historic Landmark, however, no known pre-contact or post-1912 archaeological resources would be affected. No surface-level archaeological features are visible along the proposed trail alignment, which is located on a series of beach ridges approximately 328' (100 meters) north and east (lakeside) of BR-22/XMK-044/XMK-043 (Dumond 1981; 2005). The XMK-044 site has yielded no occupational artifacts north of Katmailand lodge complex (Dumond 1981), however a significant archaeological component associated with XMK-043 was identified approximately 33 meters west of the southern end of the proposed trail. The XMK-043 component is on a distinct beach ridge running

inland of the proposed trail alignment. Trail construction excavation would go no deeper than the 1912 Katmai Ash layer to prevent inadvertent disturbance to, or discovery of, previously unidentified cultural resources. Given the shallow installation of the proposed trail footprint, and the location's extensive survey history, it is unlikely that archaeological resources would be disturbed by installation of this trail.

The NPS Ranger Station Visitor Center (XMK-093) (presently used as the Visitor Center) and the Boat House (XMK-094) (presently used as the Ranger Station) are listed on the National Register of Historic Places and are within the area of potential effect for this project. There would be no direct effect to these historic structures. The southern end of the new trail alignment would be closer to the Boat House, however people using the current trail pass to the west and to north of the Boat House before the trail turns north towards the campground. Therefore, rerouting the existing campground trail would produce no adverse effects to these historic properties.

Environmental Justice: Executive Order 12898 requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low income populations or communities. The proposed project would not result in disproportionately high direct or indirect adverse effects on minority or low income populations or communities.

Indian Trust Resources: Executive Order 13175 requires early consultation if a proposal is to have substantial direct effect on Indian Trust Resources. The proposed project area (and most of the State of Alaska) does not contain Indian Trust Resources. The proposed action would not affect these resources.

The NPS also considered but dismissed from further analysis other possible resources that are not known to exist in the area including paleontological resources and threatened and endangered species. The proposed project site is outside of designated or eligible wilderness and would not impact wilderness resources.

4 Alternatives

Alternative 1: No Action

Under Alternative 1, the trail that currently connects Brooks Camp to Brooks Campground would remain in place and unchanged. The trail would continue to be frequently used by bears foraging along the Naknek Lake shoreline, as well as those pushed onto the existing trail from high water periods on Naknek Lake. The possibility for negative human to bear interactions would remain high. Park visitors would traverse an area with high bear concentration in order to access the campground, to return from the campground to the operational area of Brooks Camp, or to access the Dumpling Mountain Trail. The Brooks Camp Cultural Landscape would not be adversely affected by the abandonment of the current trail, the installation of the southern section of the proposed campground trail, or the construction of the two (2) trail spurs. Access to Brooks Campground would continue to be provided by the existing trail that is not compliant with accessibility standards.

Alternative 2: Relocate the Trail (Proposed Action and Preferred Alternative)

Under Alternative 2, the trail that currently connects Brooks Camp to Brooks Campground would be moved to a new alignment that would be approximately 50 yards inland from the Naknek Lake shoreline, which is

the recommended safe distance from bears (Figure 2; NPS 2006). The new trail would be constructed with a geo-cell base filled with compacted gravel to make the unpaved surface compliant with accessibility standards. The new trail segment would span approximately 1,000 feet long, with a 4-foot width, and 5-inch depth. In addition to the primary trail, two east-west spur trails would be constructed approximately 150 feet each in length (with the same width and depth) that would provide access from the beach to the new Brooks Campground Trail. The alignment would be constructed in the vicinity of an existing above-ground potable water line. The new trail would originate near the NPS Ranger Station in Brooks Camp and would terminate at the south gate of Brooks Campground.

Installation of the trail would be conducted by a youth crew supported by NPS staff. The new trail surface would be wide enough for the park staff to access the campground with a small all-terrain vehicle and trailer. This would result in park staff being able to continue to transport items into the campground area for repairs and maintenance, and would facilitate access in emergency situations to transport rangers and medical staff to and from the campground quickly.

After completing the relocation of the Brooks Campground Trail, the current trail that provides access to Brooks Campground would no longer be maintained by the park and abandoned in place. Abandoning the trail would include removing wayfinding signage, ceasing maintenance activities along the trail, and updating park area maps to reflect changes to the trail system. This trail originates within the operational area of Brooks Camp, brings visitors north close to the Naknek Lake shoreline, and terminates at the campground's eastern gate. North-south traffic would be moved on to the new alignment of the Brooks Campground Trail. The existing Brooks Campground Trail is a contributing feature to the Brooks Camp Cultural Landscape and was important to the circulation patterns of Brooks Camp during the period of significance for the cultural landscape between 1950 and 1968.

Alternatives Considered but Dismissed

The park evaluated an alternative that relocated the Brooks Campground Trail further west from the existing trail (Figure 3). The new trail would originate connected to the existing trail system on the north-west side of the Brooks Camp operational area and continue north towards Brooks Campground terminating at the south gate. This alternative would allow for the separation of bears and humans from the current Brooks Campground Trail, be partially constructed within the Brooks Camp Cultural Landscape, and would be installed using geo-cells, improving accessibility to the campground. The alternative was ultimately dismissed for the following reasons:

- 1) Planes that land along the Naknek beach to load and unload park visitors would no longer have access to an accessible trail for visitors to use. This may cause visitors to use the former Brooks Campground Trail or to walk along the beach to reach the Brooks Camp operational area.
- 2) Visitors would be funneled through the NPS and concession staff housing area of Brooks Camp on the southern portion of the new trail where it connects to the existing Brooks Camp trail system. This would create an undesirable management issue where park visitors would be moving through areas that currently do not see many visitors.
- 3) Realignment the trail along this path would unnecessarily increase the length of the Brooks Campground Trail. The current trail to the campground is a direct path and relatively short walk from the Brooks Camp

operational area. The new trail alignment would take longer and could potentially cause visitors to use the former trail, the beach, or to create social trails that follow a more direct route to Brooks Campground.

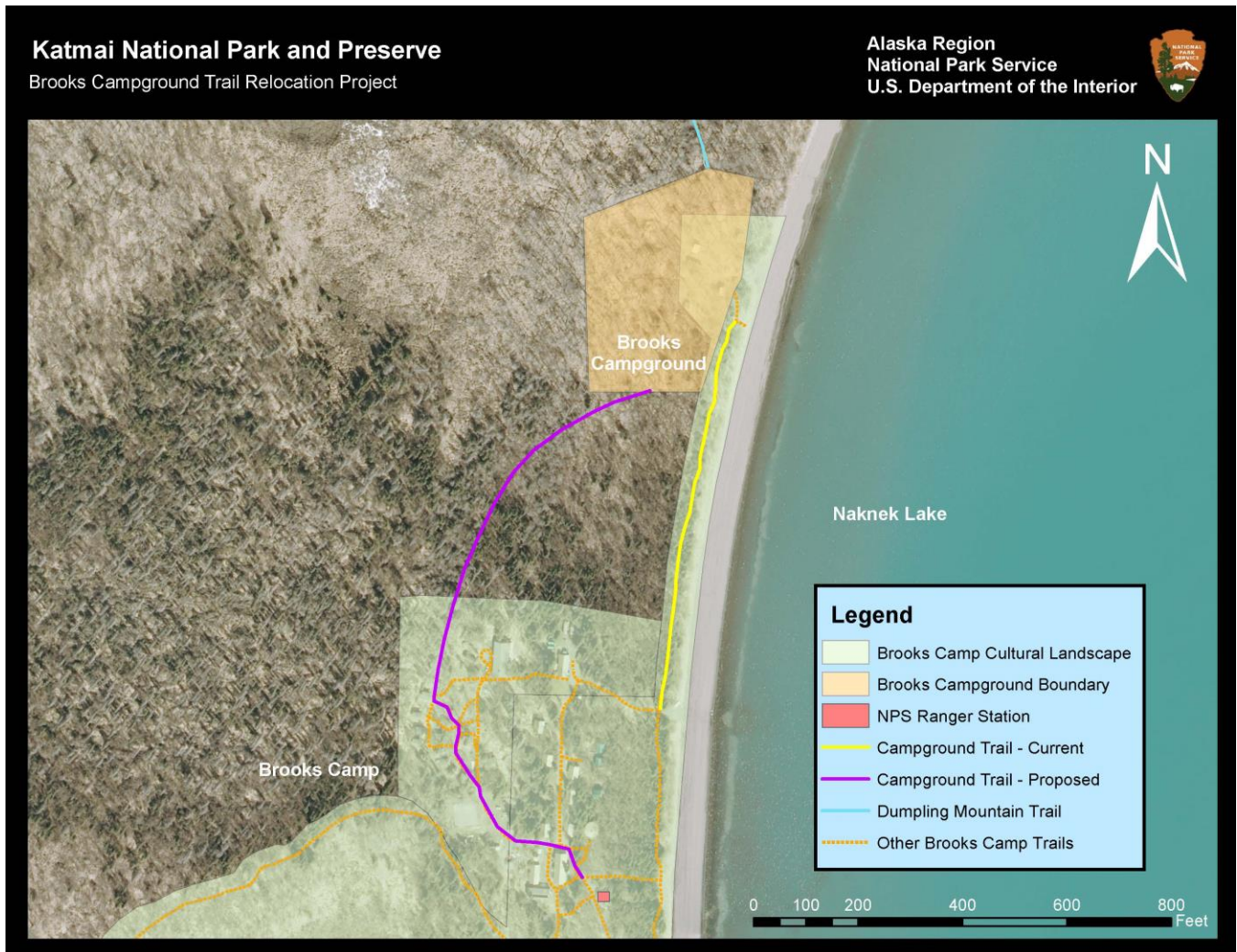


Figure 3: Proposed Trail Alignment Alternative Considered but Dismissed

Table 1: Summary of Alternatives

Action	Alternative 1: No Action	Alternative 2: Relocate the Trail (Proposed Action and Preferred Alternative)
Create new trail alignment	The existing trail that connects Brooks Camp and Brooks Campground would not be realigned. No new trail segments would be constructed.	Construct new trail alignment for the Brooks Campground Trail approximately 50 yards inland from current trail. The trail would span approximately 1,300 feet and would be hardened. The trail would be constructed using a youth crew supported by NPS staff.

Action	Alternative 1: No Action	Alternative 2: Relocate the Trail (Proposed Action and Preferred Alternative)
Abandon in place the existing Brooks Campground Trail	Existing access trail to Brooks Campground would remain in use.	Existing campground trail would be abandoned in place upon completion of new trail alignment.

5 Affected Environment

Vegetation and Soils

The vegetative environment in the project area is primarily boreal forest which occupies most of the lower elevations within Katmai National Park where the soils are deeper and richer, the summers are warmer, there are no permanent snowfields, and winds have a lower intensity than the higher elevations within the park (NPS 1986). The vegetative cover is represented by pockets of mixed forest that include white spruce, birch, or balsam poplar, alder and willow thickets, and grasslands comprised of bluegrass and blue joint grass (NPS 1986).

“In Katmai National Park and Preserve, roughly 128,000 acres of open- and closed-canopy white spruce forest exists. About 31,000 acres of this forest is within a 12 mile radius of the project area (URS 2009).” The project area is characterized by closed and open mixed needleleaf and deciduous forest of white spruce, birch, and balsam poplar. The understory consists of various willow species and alder, as well as high bush cranberry and other low shrubs (URS 2009). Brooks Campground is established within a prominent stand of balsam poplar (NPS 1996).

Within the last 20 years vast swaths of forest in south central Alaska have been killed by the Spruce Beetle (*Dendroctonus rufipennis*). Brooks Camp and the surrounding area have been severely affected by the Spruce Beetle; as a result, the area has a high number of standing dead and fallen trees (NPS 2013).

Wildlife

The wildlife habitat provided by this environment north of the mouth of the Brooks River serves many small and large mammal species, as well as a variety of birds. Mammals that inhabit the project area include brown bear, moose, wolf, wolverine, mink, short-tailed weasel, river otter, beaver, porcupine, snowshoe hare, lynx, arctic ground squirrel, red squirrel, red-backed vole, coyote, northern jumping mouse, little brown bat, and several species of shrews (NPS 1996). Given their high seasonal concentration and activity, and their appeal to park visitors, brown bears are the most prominent wildlife species in the Brooks Camp area.

The brown bear activity in the project area primarily coincides with sockeye salmon runs in Brooks River during the summer and early fall. The bears tend to concentrate along Brooks River corridor through the month of July when the sockeye salmon make their migration from Naknek Lake up to Lake Brooks. Although the numbers vary from year to year, typically 50-70 brown bears arrive in the area to feed on the migrating salmon (NPS 1996; URS 2009).

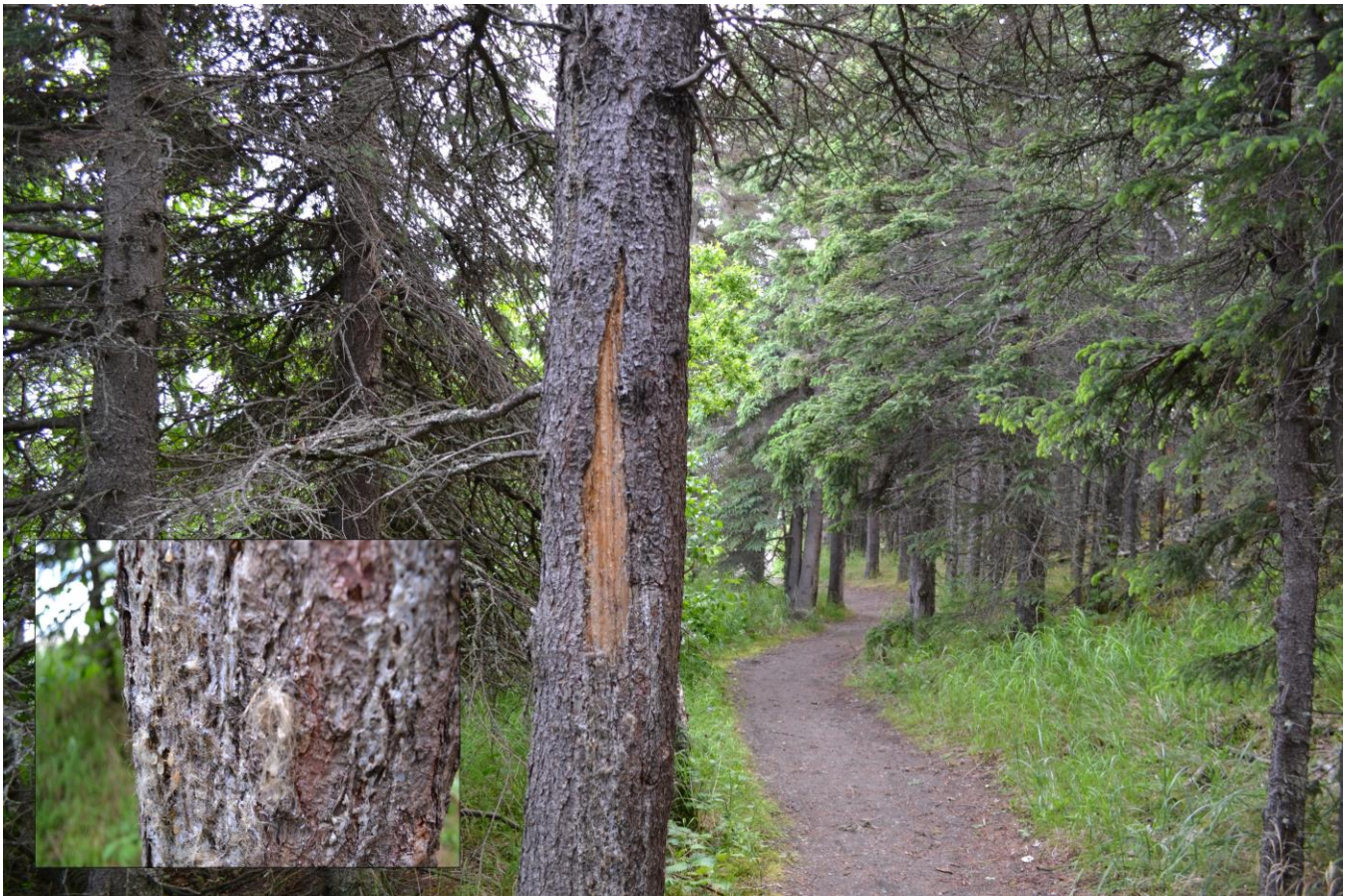


Figure 4: Section of the existing Brooks Campground Trail with signs of bear activity

Bird species that commonly inhabit the project area include bald eagles, common ravens, black-billed magpies, tree swallows, ospreys, mallards, and common mergansers. Sea birds such as Bonaparte's gulls, arctic terns, glaucous-winged gulls, and mew gulls visit the area during salmon runs and die-offs and when salmon fry and smolt numbers are high (NPS 1996). The boreal forests in the project area host several songbird species such as the dark-eyed junco, gray jay, American robin, varied and hermit thrushes, and black-capped and boreal chickadees. Tundra swans and diving birds, such as the greater scaup, and the common golden-eye are also known to use the beaver ponds in the area for feeding (NPS 1996).

Cultural Landscapes

The project area is within the Brooks Camp Cultural Landscape and the Brooks River Archeological District National Historic Landmark Cultural Landscape boundaries. The Brooks Camp Cultural Landscape is a historic vernacular landscape with significance at a local level in entertainment-recreation and conservation (NPS 2011). The period of significance for Brooks Camp is from 1950, the year the park was opened to the public and Northern Consolidated Airlines established its concessionaire facilities, to 1968 when the interpretive pit-house exhibit was completed by the park. Brooks Camp maintains integrity through defining characteristics such as natural systems and features, circulation, buildings and structures, and land use.

Landscape features include several trails that dictate the circulation pattern of the site, and presently contribute to the location, setting, feeling and association of the Brooks Camp cultural landscape (Figure 5).

“The trail system developed during the period of significance is largely intact, although it has been modified and has grown beyond its historic footprint. Pathways of particular importance include the axial trail leading from the concessionaire Lodge to NPS Ranger Station (former boathouse), **the pathway to the NPS campground**, as well as the trail leading down to the river from the concessionaire office (NPS 2011).”



Figure 5: Trails of Significance to the Brooks Camp Cultural Landscape

Visitor Use and Experience

Visitor use of the area generally consists of park visitors traveling by foot between Brooks Camp and Brooks Campground by way of the existing Brooks Campground Trail. The trail is also frequently used by visitors arriving and departing the park by float plane parked along the Naknek Lake shoreline (Figure 6). Visitors use the trail which runs close to the shoreline of Naknek Lake and are exposed to lake views periodically while walking the trail. The walk between the camp and campground is short, generally taking about 5 minutes, with viewing opportunities for a number of bird and mammal species.



Figure 6: Float planes parked along the Naknek Lake shoreline during the peak visitation period for Brooks Camp (2018)

Brooks Camp is the primary visitor use area within Katmai National Park and Preserve and has a majority of the developed overnight accommodations available in the park. Facilities includes a 60 person per night NPS campground, the 60-bed Brooks Lodge, NPS and concession employee housing, NPS interpretative and operations facilities, a floating footbridge, trails, and bear viewing platforms (NPS 1986).

The entire Brooks Camp complex, including the Naknek Lake shoreline, provides critical habitat and feeding areas for brown bears during summer and fall. A steady increase in both bear and human use of the area has been observed since facilities were developed at Brooks Camp (NPS 1986). Bears and visitors have a long history of interaction within the Brooks Camp area but within the last 40 years there have been no bear related injuries within the park, possibly in part due to the strictly applied NPS bear protocol orientation program (Ringsmuth 2013, NPS 1986).

The trail connecting Brooks Camp and Brooks Campground is often used by brown bears; especially when there are high water events in Naknek Lake, the trail offers an ideal alternative to bears that are traversing the Naknek Lake shoreline. When bear travel on the trail is high, a ranger often assists visitors to navigate the trail.

6 Impact Analysis

Alternative 1: No Action

Under the No Action alternative, the Brooks Campground Trail that currently connects the Brooks Camp and Brooks Campground areas would remain in place. No vegetation or soils would be impacted. The potential for encounters between visitors and bears utilizing the trail would remain high, particularly during times of high water in Naknek Lake. Access to the campground for emergency purposes and for visitors with disabilities would remain insufficient.

Alternative 2: Relocate the Trail (Proposed Action and Preferred Alternative)

Vegetation and Soils

The construction of the new Brooks Campground Trail would impact approximately 6,500 square feet (less than 0.2 acres) of vegetative ground cover inland and parallel to the Naknek Lake shoreline. Vegetative ground cover such as alders, willows, blue joint grass and bluegrass, downed logs, rocks, and other materials would be removed from the project area. The trail construction would avoid removal of large diameter trees by routing the trail as dynamically as possible while preserving the general course and direction of the trail. Additionally, dead standing trees that could potentially pose a hazard to the safe operation of the trail would be removed. This area has been severely affected by spruce beetles (NPS 2013) and standing and fallen dead trees are common in the proposed project area.

Approximately 2,100 cubic feet of top soil would be removed to accommodate installation of the geo-cell material that would form the compacted trail base. This topsoil would be removed from the project area by vehicle and stored at the NPS management area at 5 mile pit along the Valley of Ten Thousand Smokes Road. The topsoil would be available for fill in future park projects within the Brooks Camp area.

Once the relocation of the Brooks Campground Trail has been completed the existing trail would be abandoned in place. This would affect approximately 850 linear feet of developed trail. The trail would be abandoned in place, no further maintenance activities would be conducted along its length, and it would be allowed to return to a natural condition.

Wildlife

It is estimated that there are approximately 70 bears in the Brooks River area in the summer and 50 bears in the area in the fall, based on 2008 numbers (Ringsmuth 2013). Impacts related to the construction of the new trail alignment at Brooks Camp is anticipated to affect a large number of the bears that frequent the area. Effects during the construction period would likely include displacement and disruption to natural movement due to increased activity, noise, and fugitive dust. Disruption to bear behavior and natural movement patterns are anticipated from the project as bears that approached the project area would encounter people and machinery.

The impacts to bears over time are expected to be reduced from the relocation of the Brooks Campground Trail. The trail realignment would separate people and bears and should result in improved safety for the animals.

Bird species that inhabit the area including bald eagles, common ravens, black-billed magpies, tree swallows, ospreys, mallards, and common mergansers are sensitive to increased noise and activity. This is particularly true in the mating and nesting season. For this reason, vegetative clearing activities necessary for trail construction would not be conducted during late spring (April through July) to avoid impacting nesting bird species.

Cultural Landscapes

The Brooks Camp Cultural Landscape was inventoried in 2011 by the National Park Service and was determined eligible for listing on the National Register for Historic Places. Several characteristics were

considered when evaluating the eligibility of the Brooks Camp Cultural Landscape, including: land use, buildings and structures, natural systems and features, views and vistas, and circulation patterns.

The existing Brooks Campground Trail was determined to be a contributing feature to the period of significance (1950-1968) for the Brooks Camp Cultural Landscape. The campground trail is one of the few remaining intact trails that formed the circulation pattern of the historic camp setting. Abandonment of this trail and allowing it to return to a natural condition would constitute an adverse effect to the cultural landscape. When an action is determined to produce adverse effects to an eligible cultural resource (historic property), the action must be mitigated in accordance with the National Historic Preservation Act, Section 106 and its implementing regulations (36 CFR Part 800) to the extent possible in order to prevent, minimize or balance the negative results of the action. An adverse effect would require consultation and concurrence between the National Park Service and the State of Alaska Historic Preservation Office on a Memorandum of Agreement stipulating mutually agreed-upon mitigation measures limiting the impact of the proposed action. Other interested parties such as the Advisory Council on Historic Preservation and Tribal Governments could be consulting parties or signatories to the Memorandum of Agreement.

The Brooks Camp Cultural Landscape encompasses the entire length of the existing Brooks Campground Trail. Constructing the two spur trails from the proposed Brooks Campground Trail to the Naknek Lake shoreline would adversely affect the Brooks Camp Cultural Landscape. Additionally, the construction of a new section of trail between the Generator and Ranger Station Trails, would also result in an adverse effect to the cultural landscape.

In this instance, mitigation could include photo and video documentation, park signage and brochures depicting the historic circulation patterns, high quality georeferenced GPS location data, as well as other measures that would be determined through consultation with the State of Alaska Historic Preservation Office.

Visitor Use and Experience

The Brooks Campground employs a reservation system and is commonly at maximum capacity throughout the summer season. Approximately 60 visitors stay at the campground per night and use the trail daily during their stay. These visitors would be affected by the construction activities related to the new Brooks Campground Trail as it would occur within close proximity to the existing trail that would be in use during construction. The Brooks Campground Trail is also the primary means for visitors to access the Dumpling Mountain Trail; these visitors would also be impacted during the construction period for the new trail alignment. Visitors would be subjected to increased activity, noise, and fugitive dust from construction activities.

Views of Naknek Lake that were previously available along certain areas of the current Brooks Campground Trail would no longer be available after the trail is relocated. This has the potential to diminish visitor experience as the new trail connecting Brooks Camp and Brooks Campground would be enclosed on both sides with tall spruce and birch trees. The new trail alignment would afford visitors views into the forest but would not provide visitors with the more desirable scenic views of the lake.

Additionally, visitor safety would be improved by the relocation of the Brooks Campground Trail. The new trail alignment would be approximately 50 yards away from the Naknek Lake shoreline which is the

minimum safe distance to stay away from bears within the park. As visitors use the new trail they would be out of close proximity to bears that are foraging, fishing, and moving along the Naknek Lake shoreline. However, chance encounters could occur anywhere within Brooks Camp.

Table 2: Summary of Impacts

Impact Topic	Alternative 1: No Action	Alternative 2: Relocate the Trail
Vegetation and Soils	<ul style="list-style-type: none"> No direct impacts 	<ul style="list-style-type: none"> Less than 0.2 acres of vegetation cleared to install new trail 2,100 cubic feet of soils would be removed to install new trail 850 feet of existing trail would be abandoned in place and allowed to return to a natural condition
Wildlife	<ul style="list-style-type: none"> Bears and humans remain active in close proximity to each other along Naknek Lake shoreline 	<ul style="list-style-type: none"> Decreased likelihood of negative bear to human interactions along new Brooks Campground Trail Bears, birds, and other wildlife species temporarily disturbed by construction activities
Cultural Landscapes	<ul style="list-style-type: none"> The current Brooks Campground Trail would remain in place in its original historic context The trail section between the generator trail and the NPS Ranger station would not be constructed The spur trails would not be constructed 	<ul style="list-style-type: none"> The existing Brooks Campground Trail would be abandoned in place A new segment of trail would be constructed within the Brooks Camp cultural landscape between the generator trail and the NPS Ranger station Two spur trails would be constructed in the Brooks Camp Cultural Landscape New actions would create an adverse effect to the Brooks Camp Cultural Landscape
Visitor Use and Experience	<ul style="list-style-type: none"> Accessibility issues to Brooks Campground remain unresolved Visitor safety along the Brooks Campground Trail and emergency response issues to the campground remain unchanged 	<ul style="list-style-type: none"> Visitor safety would be improved as people are moved away from an area of high bear concentration Accessibility issues to campground would be resolved Visitors temporarily disturbed by construction activities Brooks Campground Trail would not provide views of Naknek Lake

Cumulative Impacts

The discussion of cumulative effects considers past, present, and reasonable foreseeable future actions as they relate to the proposed action and alternatives.

Past Actions

Brooks Campground has seen a number of changes in recent decades to deal with issues resulting from bears moving through the area. These past actions include new park regulations related to the storage of food and other wildlife attractants, the installation of an electric fence to keep bears away from campers, and upgrades and improvements around the campground designed to keep bears from accessing areas or interfering with gear and supplies at the site.

Visitor safety has always been a high priority for NPS managers and to date there has been only one known bear-related injury at the campground that occurred in July 1966. Bears that have frequented the campground historically have been hazed by park rangers utilizing approved methods to remove bears from the area in order to provide for visitor safety (Ringsmuth 2013). These practices have over a number of decades changed the natural behavior patterns and movement corridors of bears in the Brooks Camp area.

Past actions in Brooks Camp also include improvements to the first 500 feet of Dumpling Mountain Trail in 2017, which originates at the north end of Brooks Campground, utilizing similar techniques and materials to those proposed with the Brooks Campground Trail realignment.

Present Actions

The Brooks Campground Trail is the main access for visitors to the Dumpling Mountain Trail which originates on the northern edge of the campground. Dumpling Mountain Trail is undergoing rehabilitation - to improve access and to address grading and water drainage issues. The trail is anticipated to attract more visitors from the Brooks Camp area once the trail upgrades are complete.

The park is currently working on implementing construction of an elevated bridge and boardwalk system from the north side of the Brooks River to the south side. This bridge and boardwalk system is intended to increase safety by decreasing close encounters by visitors and bears within high use areas. Once completed, the elevated bridge will be used to facilitate the relocation of infrastructure and housing development from the north side of Brooks River to the south side.

Reasonably Foreseeable Future Actions

It is reasonably foreseeable that Katmai National Park and Preserve would continue to improve its trail network throughout the park to improve compliance with accessibility standards. Katmai National Park and Preserve is undergoing a comprehensive effort to make park facilities more accessible to visitors that have physical impairments. Trail improvements are an integral part of these improvements. Multiple improvements to trails within the park, especially within the Brooks Camp area, are currently being considered to increase accessibility. This area of improvement is a high priority and projects of this nature are anticipated to continue over time.

Within the Brooks Camp area a reasonably foreseeable future action is the construction of a trail on the north end of Brooks Camp to Mortuary Cove. This trail project is outlined in the Brooks River Area Development Concept Plan (NPS 1996). The trail would be constructed using the same accessibility standards and would connect Brooks Campground with Mortuary Cove.

Conclusion

The project would result in impacts to approximately 6,500 square feet of vegetation and 2,100 cubic feet of soils. When viewed within the context of Katmai National Park and Preserve as a whole, the impacted area would include less than 0.2 acres of boreal forest of which the park has approximately 128,000 acres, and locally the Brooks Camp area supports approximately 31,000 acres. The current trail that connects Brooks Camp to Brooks Campground would be abandoned in place and slowly allowed to revegetate, relinquishing the use of the trail to the bears that forage and fish along the Naknek Lake shoreline.

The realignment and improvements to Brooks Campground Trail would increase accessibility, improve visitor safety, separate bears and visitors in a high traffic area, and improve emergency response time to the campground and other areas north of Brooks Camp. Adverse impacts to wildlife and visitors from construction activities would last approximately 8 weeks. Beneficial impacts to wildlife and visitors, including reduced human-bear interactions and improved accessibility, would persist for the life of the trail, or several decades. The proposed project would not noticeably contribute to the cumulative effects to vegetation and soils, wildlife, or visitor use and experience in the Brooks Camp area.

The proposed project would create an adverse effect to an eligible historic property, the Brooks Camp Cultural Landscape, by diminishing the integrity of the remaining historic circulation pattern – a landscape element that characterizes the vernacular type significant to local tourism and early park development in southwest Alaska.

7 Consultation and Coordination

State of Alaska, Office of Historic Preservation

- Letter sent to the State Historic Preservation Officer on 05/23/2017 Identifying park projects anticipated for the FY17 field season
- Letter sent to the State Historic Preservation Officer on 04/11/2018 Identifying park projects anticipated for the FY18 field season

Tribal and Alaska Native Corporation Consultation

- Letter sent to Tribes and Alaska Native Corporations on 11/21/2017 – Providing an overview of the 2017 projects at Katmai National Park and Preserve (KATM) and Aniakchak National Monument and Preserve (ANIA) and inviting consultation
- November 2017 letter was followed up with subsequent phone calls to determine if further consultation was requested on upcoming park projects

- An in person consultation meeting was held in Anchorage at the NPS Regional Office with the Council of Katmai Descendants on April 19, 2018. The Brooks Campground Trail Relocation Project was among the items discussed during this meeting.
- An informational on-site meeting for this project was conducted with members of the Council of Katmai Descendants on June 3, 2018.
- Letter sent to Tribes and Alaska Native Corporations on 07/16/2018 – Providing an overview of the 2018 projects at Katmai National Park and Preserve (KATM) and Aniakchak National Monument and Preserve (ANIA) and inviting consultation
- July 2018 letter was followed up with subsequent phone calls to determine if further consultation was requested on upcoming park projects

8 References

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Appendix A:

Subsistence Evaluation: Alaska National Interest Land Conservation Act Section 810 Summary Evaluations and Findings

I. INTRODUCTION

This section was prepared to comply with Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). It summarizes the evaluation of potential restrictions to subsistence uses that could result from the proposed action by the National Park Service (NPS) to relocate a section of trail that connects Brooks Campground to the Brooks Camp operational area within Katmai National Park and Preserve.

II. THE EVALUATION PROCESS

Section 810(a) states:

“In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands...the head of the federal agency...over such lands...shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency–

(1) gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to Section 805;

(2) gives notice of, and holds, a hearing in the vicinity of the area involved; and

(3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.”

A proclamation by President Woodrow Wilson in 1918 created Katmai National Monument from a reservation of approximately 1,700 square miles. Three major purposes of the monument designation were 1) to preserve an area important to the study of volcanism, 2) to preserve the Valley of Ten Thousand Smokes and 3) to conserve an area potentially popular with persons seeking unique scenery and for those with scientific interest. Increased in 1931 to include Brooks Lake, Grosvenor Lake, Lake Colville, and part of Naknek Lake, again in 1942 to include offshore islands within five miles of the monument coastline, and again in 1969 to include the remainder of Naknek Lake, the monument grew to contain 4,361 square miles.

With the passage of ANILCA in 1980, the designation of 3.7 million acres of the monument was changed to a national park, and an additional 308,000 acres was included as a national preserve. Furthermore, 3.4

million acres of the park and preserve were designated as wilderness. The Katmai Preserve was created by ANILCA Section 202(2) for the following purposes (among others):

“...to protect habitats for, and populations of, fish and wildlife including, but not limited to, high concentrations of brown/grizzly bears and their denning areas; to maintain unimpaired the water habitat for significant salmon populations; and to protect scenic, geological, cultural and recreational features.”

The taking of fish and wildlife for subsistence uses is allowed by ANILCA within Katmai National Preserve pursuant to Section 203, however, subsistence activities are not authorized within Katmai National Park.

The potential for significant restriction of subsistence uses must be evaluated for the proposed action’s effect on “...subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.” (Section 810(a), ANILCA).

III. PROPOSED ACTION ON FEDERAL LANDS

Alternative 1 – Existing Conditions (No Action Alternative)

Under the no action alternative, the trail that is currently in place connecting Brooks Campground and the Brooks Camp operational area would remain. The likelihood for bear to human interactions would remain high and there would be no improvements to campground accessibility.

Alternative 2 – Relocation of the Brooks Campground Access Trail (Preferred Alternative)

The NPS is considering relocation of the trail that connects Brooks Campground to the Brooks Camp operational area within Katmai National Park. The proposed project would include two main components:

- 1) Relocate the Brooks Campground Trail to a new alignment that would include approximately 1300 linear feet of new trail that would be reinforced and hardened by the installation of geo-cells compacted with gravel; and
- 2) Abandon in place approximately 850 feet of existing trail by ceasing maintenance activities and allowing the current Brooks Campground trail to return to a natural condition

Alternatives 1 and 2 are described in detail in the Environmental Assessment (EA). This project occurs within Katmai National Park which is closed to Title VIII subsistence uses.

IV. AFFECTED ENVIRONMENT

ANILCA authorized subsistence uses within Katmai National Preserve, the Alagnak Wild River and on adjacent federal public lands managed by the BLM and the USFWS. Becharof National Wildlife Refuge shares a common boundary with the park. The area’s primary subsistence resources include sockeye salmon, silver salmon, whitefish, pike, rainbow trout, moose, caribou, brown bear, ptarmigan, snowshoe hare, furbearing animals, berries and various wild plants.

The proposed project would occur within the Brooks Camp developed area of Katmai National Park. Lands within Katmai National Park are closed to subsistence uses. The proposed project is not expected to

significantly restrict subsistence uses in Katmai National Preserve or any other federal lands adjacent to Katmai National Park where Title VIII subsistence is authorized.

V. SUBSISTENCE USES AND NEEDS EVALUATION

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

- the potential to reduce important subsistence fish and wildlife populations by (a) reductions in abundance; (b) redistribution of subsistence resources; or (c) habitat losses;
- the effect the action might have on subsistence fishermen or hunter access;
- the potential for the action to increase fisherman or hunter competition for subsistence resources.

1) The potential to reduce populations:

There would be no significant reductions in populations of subsistence fish and wildlife resources as a result of the proposed project to relocate the Brooks Campground Trail. There is no Title VIII subsistence use authorized in the proposed area and the proposed project should have no effect on fish, moose, bear, or small game populations occurring on Katmai National Preserve lands or adjacent federally managed lands.

2) Restriction of Access:

The proposed action to relocate the Brooks Campground Trail is not expected to limit or significantly restrict the access of subsistence users to natural resources within Katmai National Preserve or any other federal lands adjacent to Katmai National Park where Title VIII subsistence is authorized.

3) Increase in Competition:

The proposed action to relocate the Brooks Campground trail is not expected to result in increased competition for fish, wildlife, or other resources that would significantly restrict subsistence users.

VI. AVAILABILITY OF OTHER LANDS

The proposed project is site-specific to the Brooks Camp developed area located in Katmai National Park due to the location of the campground and existing trails and infrastructure connecting the area. It is determined that no other federally managed lands would be suitable for this project.

VII. ALTERNATIVES CONSIDERED

Two alternatives were analyzed for this project and are described in detail in the Environmental Assessment (EA). Both of the alternatives occur within the same area of Katmai National Park in an area where Title VIII subsistence uses are not authorized. Neither of the two alternatives proposed would significantly restrict subsistence uses in Katmai National Preserve or any other adjacent federally managed lands.

VIII. FINDINGS

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