National Park Service
U.S. Department of the Interior
Kenai Fjords National Park
Alaska

Replacement of Cottonwood Cabin

Environmental Assessment

December 2017

How to Comment on this Environmental Assessment

This environmental assessment will be open for public review for 30 days. If you wish to comment on this environmental assessment, you may submit your comments using several methods:

1. Submit comments online at the project website, at
   https://parkplanning.nps.gov/cottonwood-cabin

2. You may send comments by mail, email, or fax to:

   Superintendent
   Kenai Fjords National Park
   ATTN: Cottonwood EA
   P.O. Box 1727
   Seward, AK 99664
   Email: Sharon_kim@nps.gov
   Fax 907-422-0571

Please be aware that your entire comment, including your address, phone number, email address, or other personal identifying information in your comment, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

ON THE COVER

Cottonwood Cabin
Photo by National Park Service

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1. Proposed Action

1.1 Introduction

Kenai Fjords National Park (KEFJ) proposes to replace a cabin used for employee housing. The Cottonwood Cabin was one of three "dry" cabins constructed in the mid-1980s for park employee housing at the Exit Glacier area of KEFJ. The cabin was recently declared to be excessed property due to structural deficiencies. The State of Alaska accepted a property transfer of the cabin and removed the cabin from KEFJ in the fall of 2017. This Environmental Assessment (EA) has been prepared to analyze the potential environmental impacts of two potential actions, including the Proposed Action and the No Action alternative, in compliance with the guidance issued under Director's Order 12 to implement the National Environmental Policy Act (NEPA) of 1969 and regulations of the Council of Environmental Quality (40 CFR 1508.9) .

1.2 Proposed Action

KEFJ proposes to replace the former Cottonwood Cabin, located in the service area of Exit Glacier Developed Area. The park proposes to replace the former 14-foot by 24-foot cabin with loft with a 24-foot by 32-foot single story cabin with two bedrooms. The proposed new cabin would be built in the same location, but would be enlarged by 432 square feet as compared to the former cabin. It would be designed to meet current fire code and accessibility standards.

1.3 Purpose and Need

The primary purpose and need of the proposed project is to replace the former Cottonwood Cabin, which was not in compliance with fire code or accessibility standards, with a new, larger cabin in order to provide safe, efficient and adequate housing for park staff.

1.4 Relationship of this Proposal to Previous Park Planning

2004 Exit Glacier Area Plan

The 2004 Exit Glacier Area Plan provides guidance for management of the proposed project area. The Exit Glacier Area Plan identifies the requirement that existing structures in the Exit Glacier Developed Area be modified to meet accessibility standards, and that new structures would be accessible to people with disabilities. The 2004 Exit Glacier Area Plan calls for a remodeling and enlargement of the Cottonwood Cabin, via a constructed addition with a footprint increase of 30-40 percent (National Park Service 2004a). The proposed action differs from the plan in that the cabin has been completely removed rather than remodeled, and the footprint of the new cabin would be expanded by approximately 150 percent, rather than 30 to 40 percent.

1.5 Issues

Soils

Approximately 22 cubic yards of soil would be disturbed to construct the proposed cabin.

Vegetation

Approximately 500 square feet (0.01 acres) of previously undisturbed forest would be disturbed for construction of the proposed cabin. It is anticipated that one cottonwood tree would need to be felled for the project.

Wildlife

The proposed project would create a small, localized disturbance in a previously disturbed area currently used for park housing. Temporary disturbance from construction activities would also occur. Migratory Bird Treaty Act timing guidelines would be followed when clearing vegetation at the project site to avoid disturbance to nesting birds in the area; brush or tree removal would occur outside of May 1-July 15.

Soundscape

Temporary and localized noise associated with construction of a new cabin would occur in a developed area near a road and parking lot.

1.6 Issues considered and dismissed

Air quality

Air quality may be temporarily affected during construction, but this would be localized and within a footprint of only a few thousand square feet.

Cultural Resources

The project is on glacial outwash less than 100 years old, and the likelihood of encountering cultural resources is very low. The area has been repeatedly screened for cultural resources. The cabin was constructed in the late 1980s and is not historically significant. Concurrence for "No Historic Properties Affected" by the proposed action from the State Historic Preservation Office (Section 106 concurrence) has been received (Alaska State Historic Preservation Officer 2016).

Environmental Justice

Federal agencies are required to analyze the impacts of their proposed actions and policies on minority and low-income communities and populations, to assess the possibility of any disproportionate adverse effects to human health or the environment. The project will not result in a significant impact to the socioeconomic environment or community, and is therefore dismissed from further consideration.

Indian Trust Resources

The proposed project area does not contain Indian Trust Resources.

Subsistence

ANILCA Section 810 requires federal agencies to analyze the impacts of federal actions on subsistence resources and lifestyles. Subsistence use is not allowed in Kenai Fjords National Park, and proposed activities would not affect subsistence outside of park boundaries. Therefore no impacts to subsistence would occur from this project.

Threatened and Endangered Species

The Endangered Species Act (1973) requires an analysis of impacts on all federally listed threatened and endangered species, as well as species of special concern. No federally designated threatened or endangered species are known to occur within the project area.

Visitor Experience

Visitor experience would be mostly unchanged by this project, although it is possible that low-level construction noise could be heard at or near the visitor center approximately 1,030 feet (315 meters) away.

Wetlands

There are no wetlands in the project area; no wetlands would be disturbed by the project.

Wilderness

The proposed project area is sited in the Exit Glacier Developed Area, outside of eligible wilderness; wilderness values would not be impacted by this project (National Park Service 2004a).

Viewshed

The viewshed would be unaffected by this project. The temporary visual disturbance of construction would be limited to a small area out of view of visitors except in the winter months. Construction would occur in the summer.

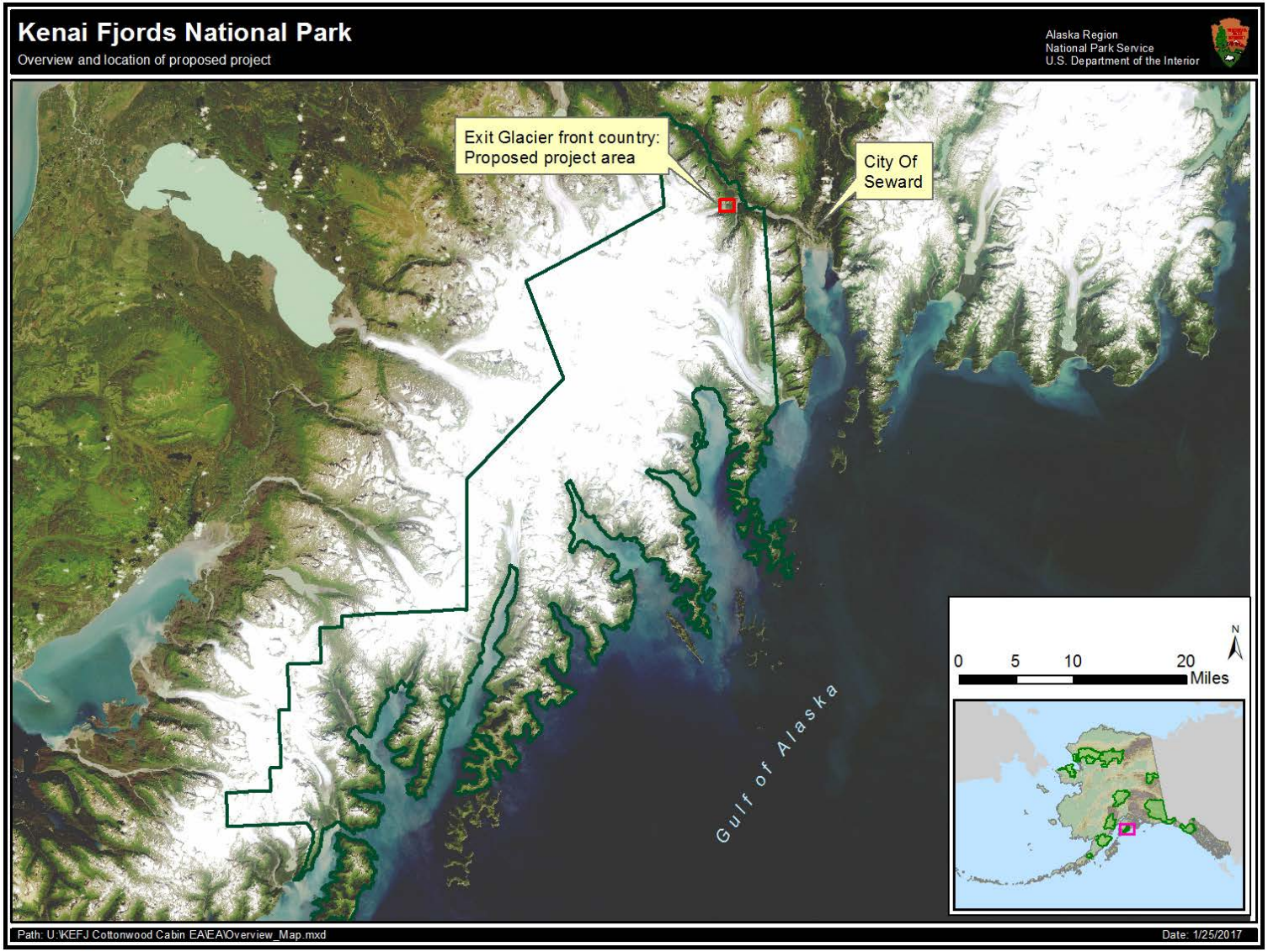

Figure 1. Location of Exit Glacier Developed Area in context of Alaska and KEFJ.

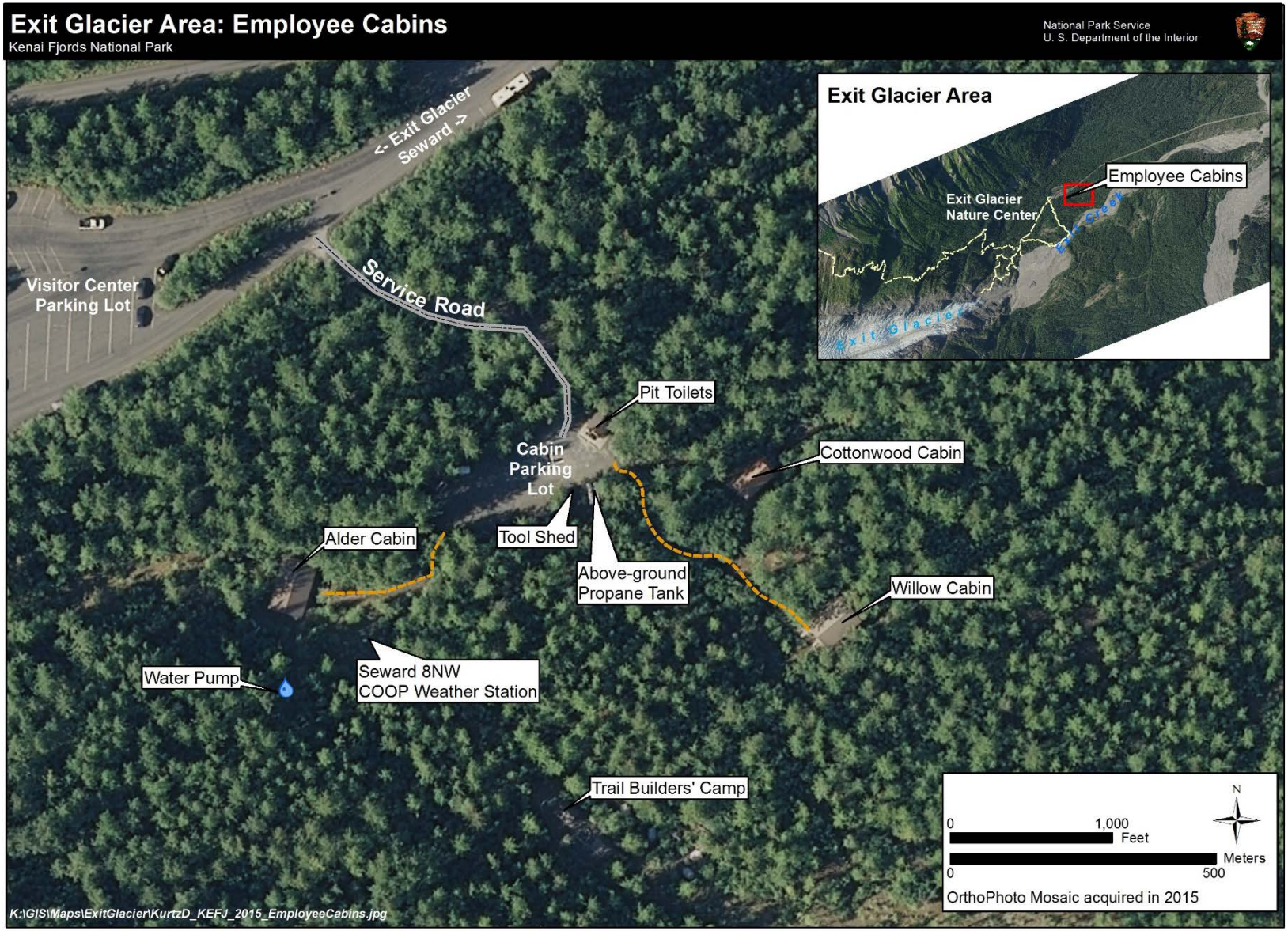

Figure 2. Location of Cottonwood Cabin off the Exit Glacier service road. Map by D. Kurtz, KEFJ Physical Science Program Manager.

2. Alternatives

This section presents two alternatives: the No Action alternative, and the Preferred Alternative.

2.1 Alternative 1- No Action

Under this alternative, the Cottonwood Cabin would not be replaced with a cabin that is 432 square feet larger. No new disturbance to soils or vegetation would occur.

2.2 Alternative 2- Replace Cottonwood Cabin (Proposed Action and Preferred Alternative)

Under this alternative, the former 14-foot by 24-foot cabin with loft would be replaced with a 24-foot by 32-foot single story cabin with two bedrooms. A graywater treatment system would be installed to properly dispose of gray water from the kitchen sink, requiring excavation of twelve cubic yards of soil. The soil would be backfilled once the pit is installed. The former cabin was a “dry” cabin with no piped water and no restrooms, and water use was limited to kitchen uses. The new cabin would also be “dry.” The new cabin would be built in the same location, but would be enlarged by 8 additional feet on each dimension. A ramp with hand rail would be installed on the new cabin. The cabin would meet accessibility standards. A fire suppression system would also be installed, as per new code requirements.

3. Affected Environment

This section discusses the existing condition of the resources that could be potentially affected by the alternatives.

3.1 Soils and Physiography

The proposed project area is located on glacial outwash in the inactive floodplain of Exit Creek downstream of Exit Glacier. Exit Glacier covered the project area in 1914. By 1917, the project area had been exposed by glacial retreat (National Park Service 2004b). The physiography is riverine, within a glacial watershed. The soil texture is classified as “sandy-loamy-rocky” (National Park Service 2013). Loam is a mixture of sand, silt or clay. “Sandy-loamy-rocky” soil texture is defined as a variety of textures ranging from loamy to sandy, with greater than 15 percent rock fragments of size greater than 1/16 inch (2 mm) common, in the top 1.3 feet (40 cm) of soil (Wells 2014). This soil texture is common and widespread throughout recently deglaciated valley bottoms of Kenai Fjords National Park (National Park Service 2013b).

3.2 Vegetation

The vegetation type at the proposed project site is closed black cottonwood forest. Closed black cottonwood forests occur mainly on low elevation floodplains, outwash plains and alluvial fans. The forest consists of at least 60 percent black cottonwood (*Populus balsamifera* ssp. *trichocarpa),* with Sitka spruce (*Picea sitchensis*) seedlings through mature trees common, and Sitka alder (*Alnus viridis* ssp. *sinuate*) common in the understory (Kenai Fjords National Park, 2008). Closed black cottonwood forest represents 0.20 percent of the vegetated landcover of KEFJ (Boggs et al 2008). The majority of the closed black cottonwood forest mapped in the park is within the Exit Glacier

floodplain area. The US Forest Service states that black cottonwood stands are “common and productive on alluvial floodplains in south-central and southeastern Alaska” (Innes 2014). The proposed disturbed area is approximately 500 square feet (0.01 acres).

3.3 Wildlife

Mammals known to commonly occur in the Exit Glacier area include moose (Alces alces), black bear (Ursus americanus), brown bear (Ursus arctos), hoary marmot (Marmota caligata), snowshoe hare (Lepus americanus), porcupine (Erithazon dorsatum), ermine (Mustela erminea), red squirrel (Tamiasciurus hudsonicus), and red-backed vole (Clethrionmys rutilus). Rarely, wolves, lynx, coyotes, and mustelids including wolverine, marten, mink, and otter are observed. 62 species of birds have been identified in the Exit Glacier management area as of 2002 (National Park Service 2004a).

3.4 Soundscape

Localized noise associated with construction of a new cabin would occur in a developed area near a road and parking lot. Currently, in the general project area (identified as the Visitor Facilities in the Exit Glacier area), sounds generated by humans are audible approximately 59 percent of the time (National Park Service 2013b).

4. Direct and indirect impacts

4.1 No Action Alternative

Under the No Action Alternative, a replacement for Cottonwood Cabin would not be constructed. The existing condition of soils, vegetation, wildlife, and soundscape would be unchanged. The purpose and need for the project would not be addressed; safe, efficient, and adequate housing for park staff would not be developed in the proposed project area.

4.2 Replace Cottonwood Cabin (Proposed Action and Preferred Alternative)

Soils

Under the preferred alternative, approximately 22 cubic yards of soil would be directly impacted in an area less than 1000 square feet around the proposed cabin site. An estimated 12 cubic yards would be backfilled in place. The remaining soil would be used to level the construction site.

Vegetation

Approximately 500 square feet of previously undisturbed vegetation would be directly impacted. The vegetation would be removed in order to construct the proposed Cottonwood Cabin replacement, in a closed black cottonwood forest, which is a widespread forest type in Southcentral Alaska (Innes 2014). The cleared brush would be placed in the forest behind the cabin to decompose naturally, or chipped if quantities of cleared brush are obtrusive.

Wildlife

Localized direct disturbance to wildlife may occur as a result of construction activities. This could include avoidance of the area during construction. Given the scale and location of proposed construction activity, species in the Exit Glacier area are not at risk of being extirpated from the area, and habitat for all species would remain functional (National Park Service 2004a).

Soundscape

Noise from one to two summer construction seasons of a new cabin would directly impact the soundscape for periods of time that may exceed six total hours a day. Construction noise would not be readily audible at distances exceeding 1 mile (National Park Service 2004a). This additional noise would be in a location that is subject to sounds generated by humans approximately 59 percent of the time on average. During the summer season, human-generated sounds are audible in this area greater than 90 percent of the time during the hours of 10am to 6pm, and greater than 50 percent of the time from 8am to 10am (National Park Service 2013b).

Table 1. Effects of alternatives on potentially affected resources

Affected Resource	No Action Alternative	Proposed Action
Soils	No new disturbance to soils would occur.	Approximately 22 cubic yards of soil would be excavated, and used to backfill and level the construction area.
Vegetation	No new disturbance to vegetation would occur.	500 square feet of previously undisturbed vegetation, including one cottonwood tree, would be removed.
Wildlife	Wildlife would not be affected by a new disturbance.	Localized and seasonal construction noise and traffic would occur in an area currently used for housing.
Soundscape	Sound levels would remain unaffected by construction.	Local construction sound would occur during the day during the summer season, in a developed area currently subject to anthropogenic noise 59% of the time (National Park Service 2013b).

4.3 Mitigation measures

Migratory Bird Treaty Act timing guidelines would be followed when clearing vegetation at the project site to avoid disturbance to nesting birds in the area. Brush or tree removal would occur outside of May 1-July 15.

4.4 Cumulative impacts

Cumulative impacts are effects that result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes such actions.

Previous transportation-related infrastructure development in the area includes a road from Seward; a parking lot; and a trail system. In 2016, to mitigate seasonal flooding issues, a one-mile length of the road to Exit Glacier was raised by approximately 5 feet and widened by approximately 12 feet within the park boundary.

Other infrastructure and facilities include the Exit Glacier Nature Center; restroom facilities; a well pump house; the education pavilion; several vault toilets; a warming hut; an emergency shelter at the end of the Harding Icefield Trail; a campground; trail crew cooking hut; and two cabins used for employee housing. The former Cottonwood Cabin was removed in the fall of 2017.

No additional front country infrastructure projects are currently planned for the Exit Glacier developed area, aside from maintenance of existing infrastructure. In 2018, a new front country planning process is scheduled to begin as KEFJ revisits the Exit Glacier Area Plan.

Alternative 1 would not generate direct or indirect effects and therefore would have no contribution to cumulative effects. Alternative 2 would affect approximately 22 cubic yards of soils, 500 square feet of undisturbed vegetation, and generate localized construction noise audible people and wildlife in the vicinity. The contribution of direct and indirect impacts from Alternative 2 to cumulative effects in the proposed project area would be very small; the resources potentially affected would in principle continue to function within normal limits and trends, as described in the affected environment section.

6. Consultation and coordination

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