National Park Service
U.S. Department of the Interior

Klondike Gold Rush National Historical Park
Interior Region 11 – Alaska

Dyea Recreational Facility Improvements

Environmental Assessment

June 2021

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You may also comment for this project online at http://parkplanning.nps.gov. Retrieve https://parkplanning.nps.gov/Proposed_Dyea_Facility 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

Chris and Pam Birch at the Chilkoot Trail iconic sign with grandchildren Mason and Ellie, June 2018. (Photo: Pam Birch, used with permission)

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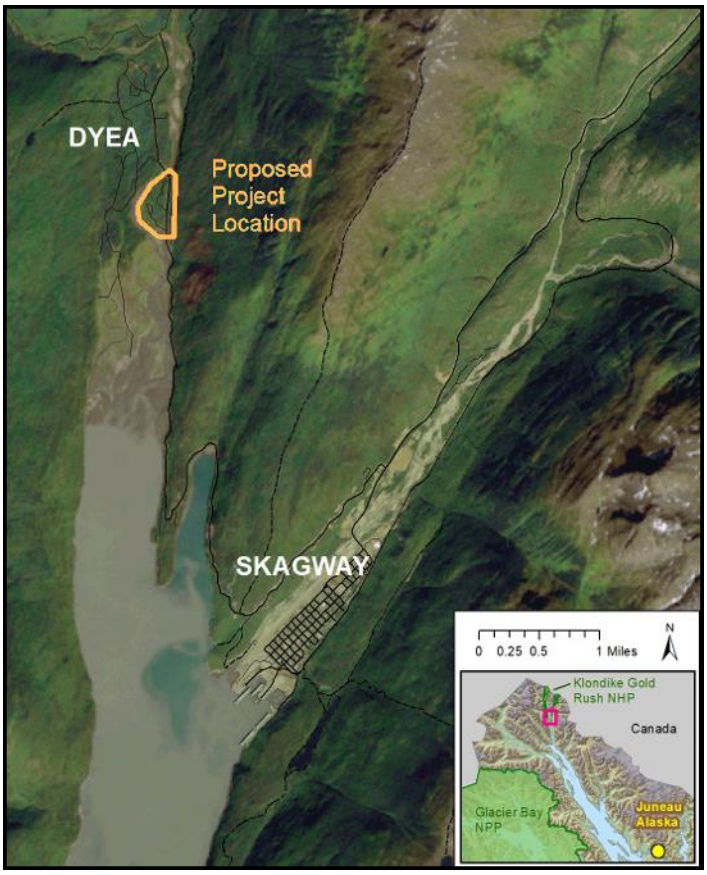
List of Acronyms

ABA	Architectural Barriers Act
ADA	Americans with Disabilities Act
KLGO	Klondike Gold Rush National Historical Park
NPS	National Park Service
SEAK	Southeast Alaska

1 Proposed Action

Klondike Gold Rush National Historical Park (KLGO) proposes to construct and renovate facilities associated with the trailhead for the Chilkoot Trail and the National Park Service Dyea Campground. A new trailhead parking area would be constructed for the Chilkoot Trail with visitor services (vault toilet, benches, viewpoints, wayfinding) and interpretive exhibits. An existing parking area at the campground entrance would be repurposed, a road segment within the campground would be relocated, and a portion of a footpath between the campground and trailhead would be defined and developed (Figure 1). The details of this action are included under Alternatives.

Figure 1. Proposed Project Location in Klondike Gold Rush National Historical Park



2 Purpose and Need

The purpose of the proposed project is to enhance visitor services in Dyea including visitor orientation, public safety, and recreation opportunities. The purpose also includes developing a setting to provide a more clearly delineated arrival location at the historic Chilkoot Trail.

The project is needed to address haphazard, unauthorized roadside parking, pedestrian access, and safety concerns near the Chilkoot Trail trailhead. Existing parking for the Chilkoot Trail is informal and impinges on a State of Alaska right-of-way for the Dyea Road. Overnight parking for permitted trail hikers is currently located approximately one-half mile from the trailhead. Development of a portion of the footpath between the campground and proposed parking lot would expand pedestrian access options. Relocating a road segment within the campground would provide better maneuverability for larger vehicles.

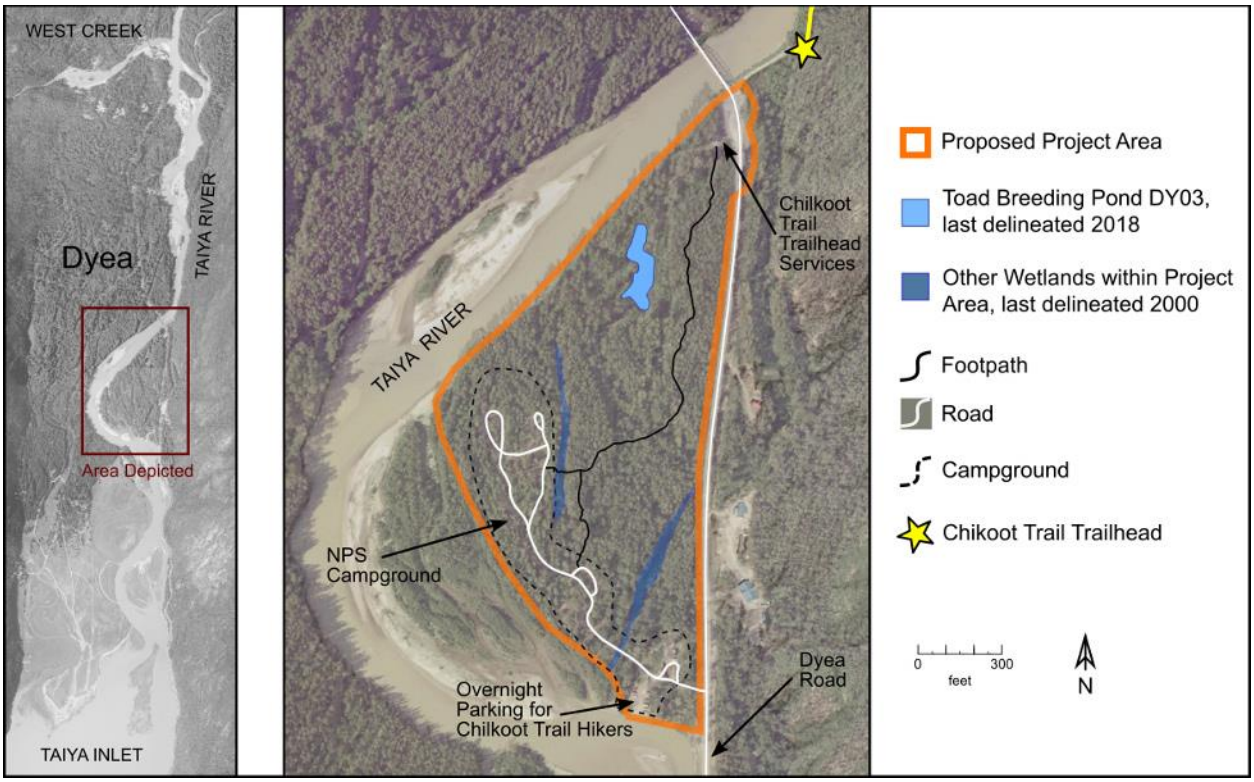
Objectives of the proposed project include minimizing resource impacts while expanding visitor services for overnight Chilkoot Trail hikers, day use visitors, and clients of commercial use operators.

3 Background

The project area is a pie-slice shaped wedge of approximately 37 acres located in Dyea near the Taiya River bridge (Figure 2). It is bounded on the east side by the Dyea Road, on the west side by a large meander of the Taiya River, and on the south side by the NPS campground (including the campground).

The general area of the site has been used by indigenous Tlingit peoples for millennia. At the time of the 1898 Klondike Gold Rush, the main channel of the Taiya River was east of the present day Dyea Road and the Tlingit were present in the area, harvesting resources and controlling Chilkoot Trail trade and transport. During the gold rush, a part of the stampeder boom town of Dyea was located in what is now the southwest corner of the project area, potentially including the terminal campground road loops. (Flood et al. 2021)

Figure 2. Existing Visitor Services within Proposed Project Area



A portion of the project area was a gravel extraction quarry in the 1950s-60s, and was an informal recreation area with an off-road track through the interior until about 2005. The NPS campground was established in 1979 and grew to its current configuration over the intervening years to the present. (Flood et al 2021)

A 1 to 2 foot wide simple footpath connects the campground to the Chilkoot Trail trailhead services area near the Taiya River bridge. The footpath splits near the campground into two legs, one of

which crosses a wetland last delineated in 2000 that also serves as a drainage channel when the campground experiences periodic (about once per year) flooding.

The NPS campground was improved in 2019-20 to comply with federal Americans with Disabilities Act (ADA) of 1990 and Architectural Barriers Act (ABA) of 1968 accessibility standards for outdoor recreation areas (US Access Board 2014). Informal parking near the Chilkoot Trail trailhead does not include dedicated ADA/ABA accessible spaces. The vault toilet and information kiosk in the small visitor service area near the trailhead are accessible on a packed gravel and dirt surface. The Dyea Road provides an accessibility connection between the campground and trailhead areas.

4 Issues

Issues Selected for Detailed Analysis

Wildlife: Constructing facilities would reduce and fragment habitat for Boreal toads, birds, and mammals. Increased human activity during and after construction would likely displace wildlife from the proposed project area.

Vegetation: Constructing facilities at the trailhead and adding a road segment in the campground would remove vegetation in the proposed project area. Three plant species of conservation concern to the park and potentially rare in the region occur in the proposed parking area and would be removed or eliminated at that location during construction. Additional vegetation values that could be impacted include harvestable berries and mushrooms; and a complex, varied, and diverse habitat character unusual for the area. Facility construction, including the proposed parking lot and the footpath between the campground and trailhead, would increase expansion of invasive exotic plants into the proposed project area.

Hydrology, Wetlands, and Floodplains: A recent geomorphic analysis of the lower Taiya River describes present conditions and projects future changes in river position, flow, and groundwater movement (Curran 2020). In the long-term, the study found that the river was becoming less prone to changing location. However, within the lifetime of this project, the Taiya River has the potential to inundate and potentially erode facilities developed in the Dyea area. Changes to the footpath connecting the campground and proposed trailhead parking area could alter a wetland last delineated in 2000 that formed within a former river channel and is an active drainage channel during periodic river flooding events.

Soils: Constructing facilities at the trailhead and adding a road segment in the campground would alter soils in the proposed project area. As previously referenced in Hydrology, Wetlands, and Floodplains, the proposed footpath between the campground and trailhead would include a footbridge across an area of wetland soils near the campground.

Recreation: Constructing and upgrading facilities to create a sense of arrival for the Chilkoot Trail area would change visitor orientation, visitor services, and interpretation of natural and cultural resources. Constructing facilities could change the setting of Dyea including undeveloped scenic beauty and opportunity for experiencing solitude and nature.

Issues Considered but Dismissed

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

Archeology: As part of the Section 106 of the National Historic Preservation Act review for this project, a thorough archeological investigation of the proposed project area completed in 2020 failed to discover Tlingit artifacts or historic artifacts older than mid-20th century (Flood et al. 2021). The broken glass found was evaluated and determined to have neither integrity nor significance and is therefore not eligible for nomination to the National Register of Historic Places. Because artifacts are not present at the proposed project site, archeology is not further discussed.

Cultural Landscape: Parts of this area sit within the Dyea Cultural Landscape and within the boundary of the Chilkoot Trail and Dyea National Historic Landmark. Providing improved cultural landscape education/interpretation opportunities in the proposed project area was identified in the 2014 cultural landscape investigation for Dyea (NPS Cultural Landscapes Program 2014). In addition, the State Historic Preservation Officer concurred with the park's Section 106 finding of "no adverse effects on historic properties" for the project in April 2021.

Bald Eagle Nest Protection: A Bald Eagle nest located across the Taiya River to the west of the terminal campground loops was assessed for potential to cause disturbance to the nest. The nest was determined to be outside the zone of potential disturbance following U.S. Fish and Wildlife Service guidance (KLGO 2021 USFWS Bald Eagle Disturbance Determination).

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

5 Alternatives

This section describes a No Action alternative and the action alternatives, as well as a brief description of alternatives considered but dismissed from further analysis.

Alternative 1: No Action

The No Action alternative would continue the existing situation. Parking at the trailhead would remain informal, unmanaged, and impinge on a State of Alaska right-of-way. Unauthorized roadside parking on the Dyea Road at the Chilkoot Trail trailhead near the single-lane Taiya River bridge creates visual interference for pedestrians and parking vehicles during high use periods. At times, oversized vehicles parallel parking on the road shoulder and multiple tour groups unloading up to 60 people at the trailhead can lead to the unsafe condition of visitors walking or standing in the road.

Parking for overnight trail hikers would remain at the campground entrance, about one-half mile from the trailhead. Enhanced visitor services, Chilkoot Trail arrival orientation, and improved cultural and natural interpretation would not be provided. The iconic Chilkoot Trail Unit sign would remain on the east side of the Dyea Road.

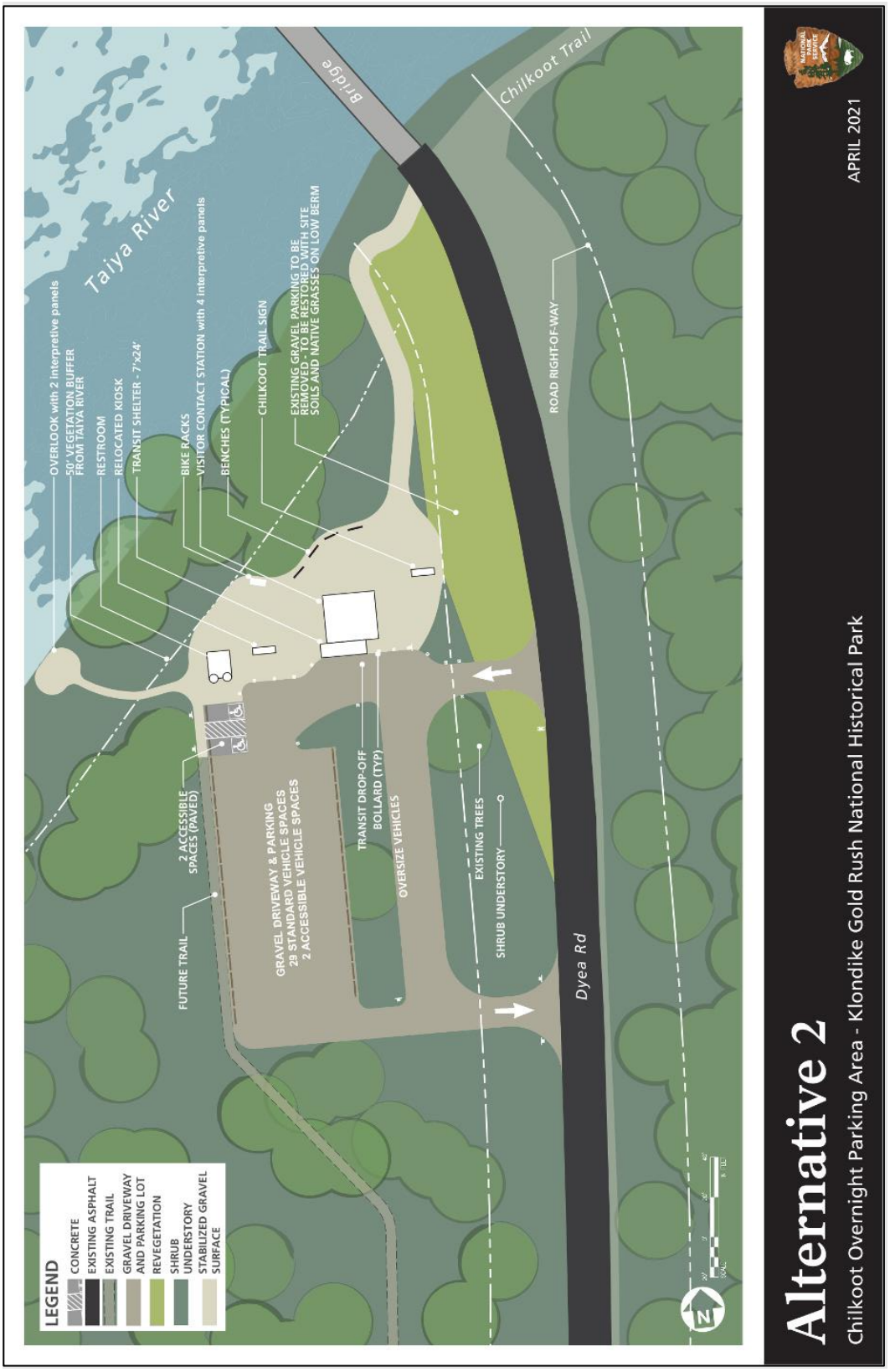
The two terminal campground road loops would not change. The existing footpath with two connections at the campground and one at the existing trailhead service area, would not be altered to include ADA/ABA accessible sections (Figure 2).

Alternative 2 (Proposed Action and Preferred Alternative)

Alternative 2 would create an improved sense of arrival for the Chilkoot Trail by constructing a new 0.7 acre visitor service area south of the Taiya River bridge and west of Dyea Road (Figure 3). A new parking area would provide parking for private and commercial day use visitors, and overnight parking for permitted trail hikers. The main parking lot would include spaces for 29 standard vehicles and two (2) vehicle spaces to accommodate people with disabilities. Two (2) oversized commercial vehicle spaces would be located across from the island in a separate travel lane. A transportation shuttle drop-off and pick-up area with adjacent weather shelter would be created along the entrance driveway.

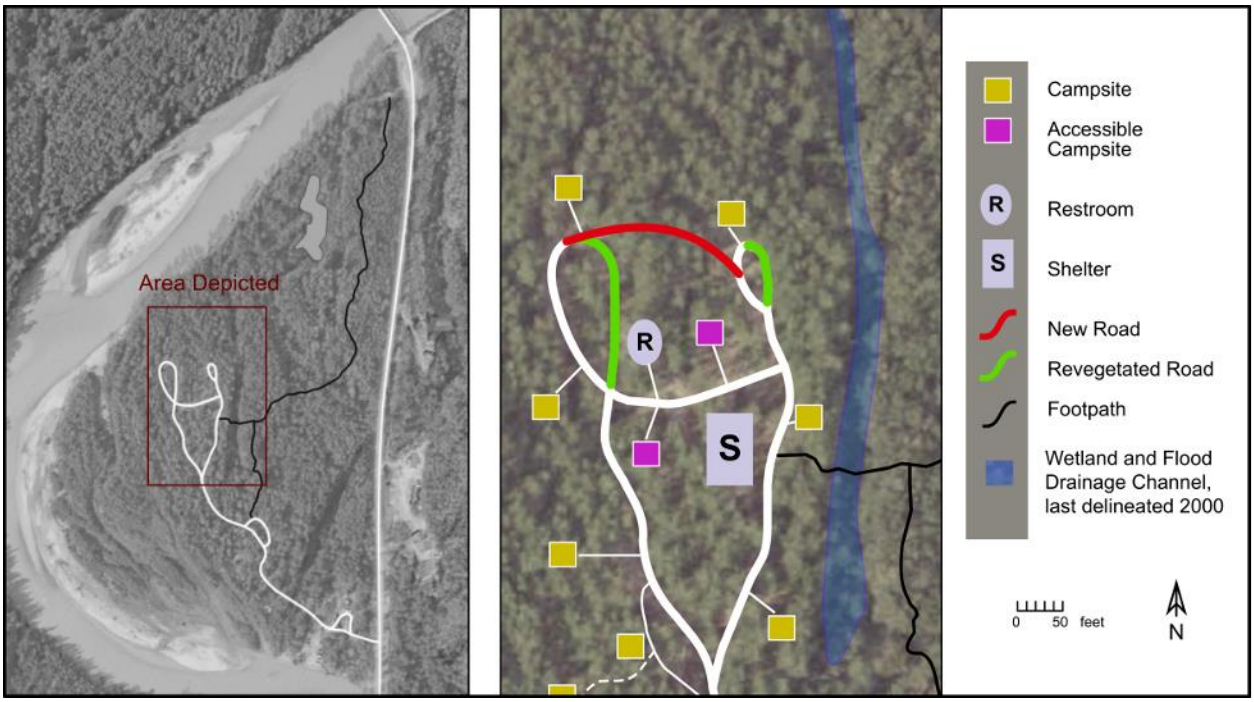
The pedestrian services area would include a new restroom (vault toilets) and relocated trash bins and orientation kiosk. A new river overlook feature would be constructed with views of the historic landscape and two interpretive panels. A new visitor contact station would be constructed with 4 interpretive panels. The iconic Chilkoot Trail sign would be placed in the pedestrian area near the Dyea Road right-of-way, and new location signs would be placed at the road shoulder near the parking area entrance driveway. Bike racks and four benches would be placed in the pedestrian area. A path from the pedestrian area to the Chilkoot Trail trailhead would be delineated, including a road crossing near the bridge. Areas not used for services would be revegetated with native plants.

Figure 3. Alternative 2: Arrival Site



A new road segment connecting the two terminal loops of the campground road would be constructed, and redundant sections of the loops would be revegetated with native plants (Figure 4). The existing overnight parking area at the campground entrance would become a day-use only area.

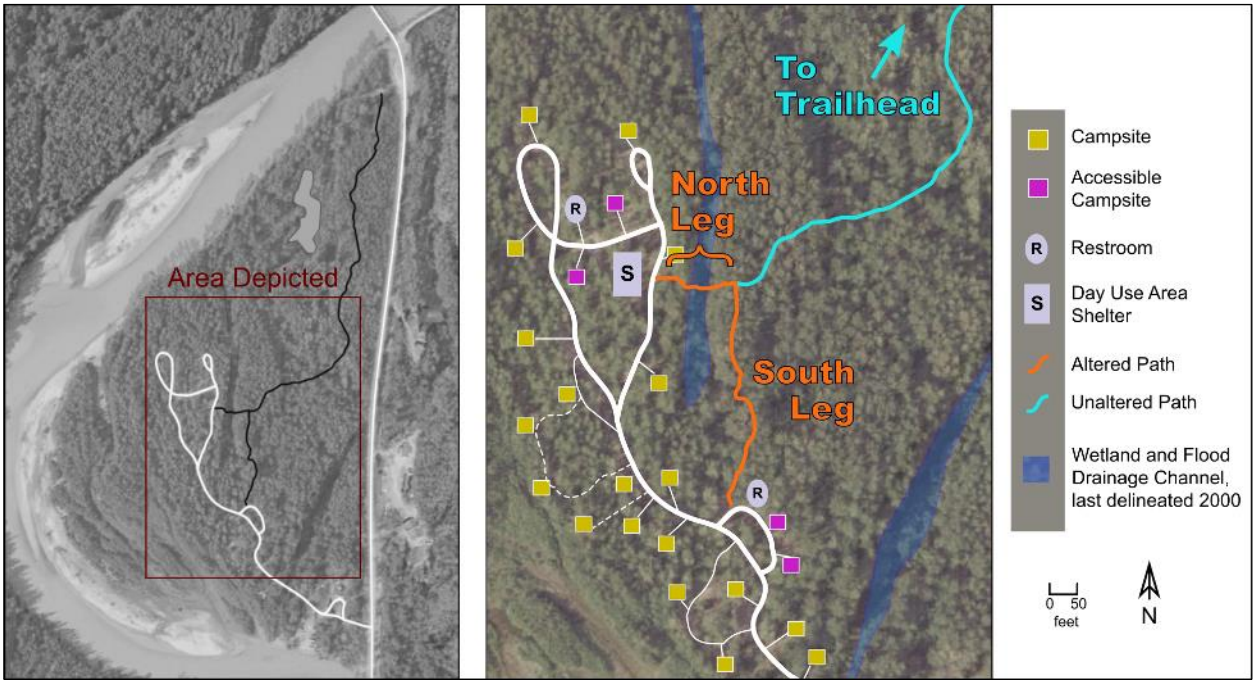
Figure 4. Alternative 2: Campground Road Segment



The footpath leading from the campground to the new Chilkoot Trail arrival area near the Taiya River bridge would be altered to create an ADA/ABA accessible path about 570 feet long near the campground by widening the existing trail, installing a footbridge, importing fill material, and creating a firm and stable surface using compacted gravel (Figure 5). This accessible trail would connect the two areas of the campground that contain accessible campsites.

The footpath splits near the campground into two legs: the north leg traverses a flood drainage and wetland slough (about 60 feet) near the campground day use area shelter; the south leg connects to an accessible campsite & restroom area. Beyond the newly created ADA/ABA accessible loop, the remaining portion of the footpath from the loop to the new parking lot would not change.

Figure 5. Alternative 2: Footpath

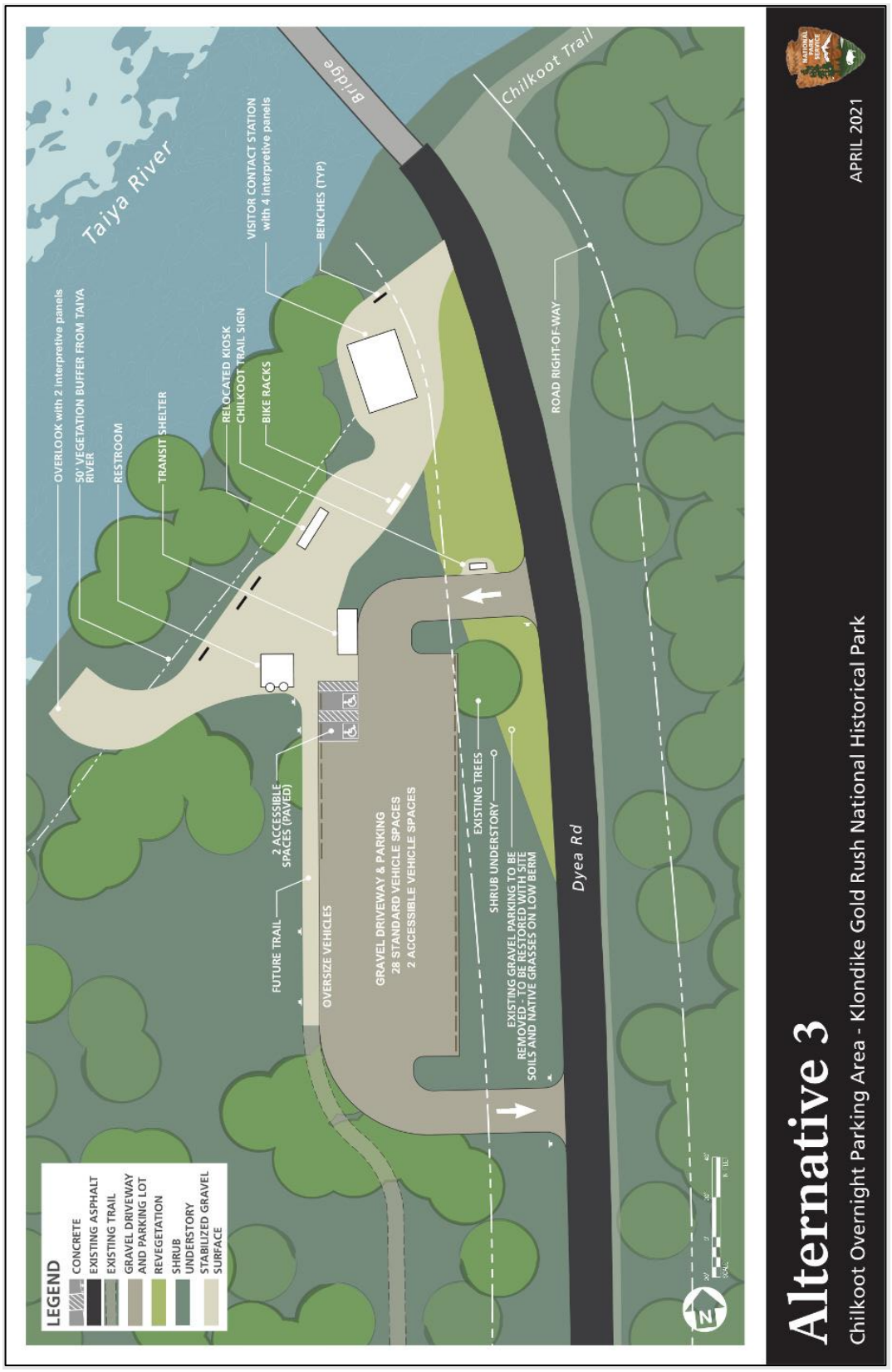


Alternative 3

Alternative 3 would also create an improved sense of arrival for the Chilkoot Trail by constructing a new visitor service area near the bridge (Figure 6). The 0.7 acre design is approximately the same size, but differs from Alternative 2 in shape and placement. Compared to Alternative 2, this alternative would provide less separation between oversize and standard vehicles, three (3) fewer standard-size parking spaces, a larger pedestrian area near the Taiya River, and different modifications to the footpath connecting the campground to the Chilkoot Trail. The iconic Chilkoot Trail sign would be placed outside of the pedestrian area along the entrance driveway to the parking lot, inside the Dyea Road right-of-way. The pedestrian services area would include restroom (vault toilets), trash bins, kiosk, overlook, visitor contact station, benches, and bike racks similar to Alternative 2.

The parking lot would include spaces for 26 standard vehicles (instead of 29 in Alternative 2), with two (2) vehicle spaces to accommodate people with disabilities and two (2) spaces for oversize commercial vehicles (similar to Alternative 2). A transportation shuttle drop-off and pick-up area with adjacent weather shelter would be created where the entrance driveway turns into the parking lot.

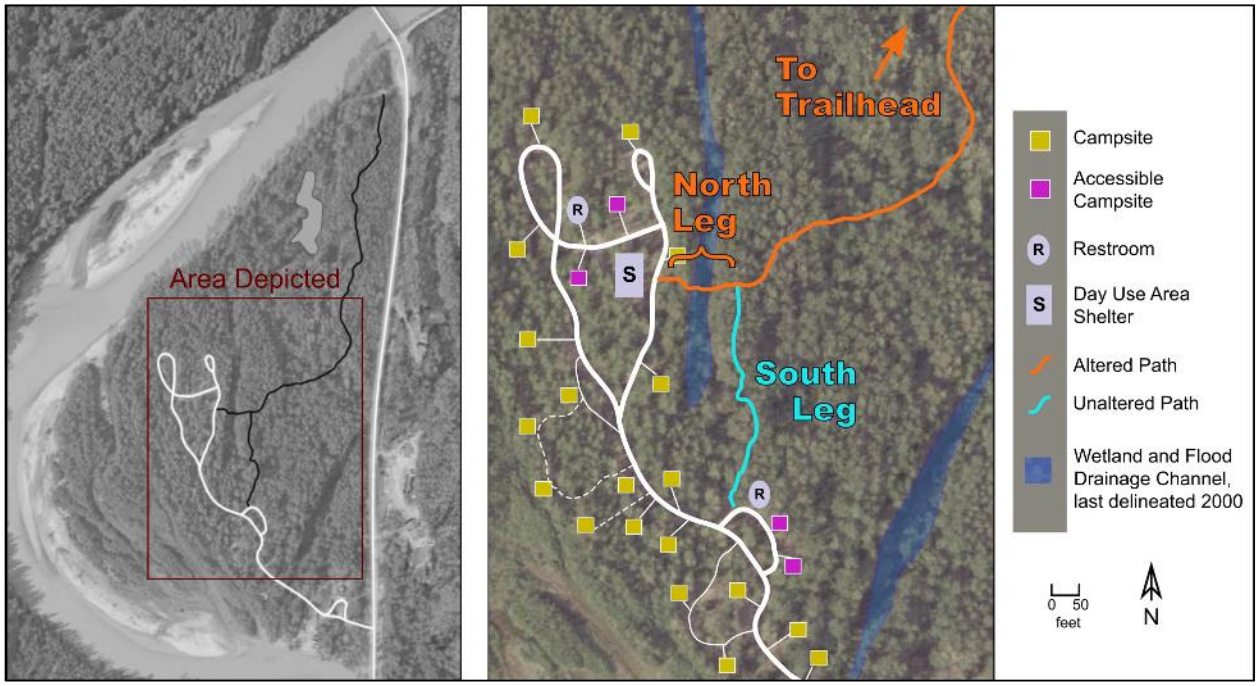
Figure 6. Alternative 3: Arrival Site



The new road segment connecting the two terminal loops of the campground road, and the existing overnight parking area at the campground entrance would be treated as described in Alternative 2.

The footpath leading from the campground to the new Chilkoot Trail arrival area near the bridge would be altered to create an ADA/ABA accessible path from the campground along the entire distance of about 0.3 miles (1,650 feet) to the parking lot (Figure 7). The ADA/ABA accessible trail would be constructed by widening the existing trail, installing a footbridge, importing fill material, and creating a firm and stable surface using compacted gravel. This pathway alters the north leg of footpath near the campground, while the south leg would remain unchanged.

Figure 7. Alternative 3: Footpath



Alternatives Considered but Dismissed

Several additional design concepts were created in the planning phase for this project. The primary sites considered for development were adjacent to the beginning of the Chilkoot Trail trailhead. The design concepts varied somewhat in size, shape, location, and function. Several of these design concepts were dismissed as minor variations of an alternative considered or because the location of the proposed parking area would generate greater impacts to biological resources, particularly Boreal toads and vegetation.

Retaining overnight parking at the campground entrance and placing shuttle transportation near but separate from the proposed parking lot was also considered. This alternative was dismissed because it did not provide overnight parking for permitted Chilkoot Trail hikers close to the trailhead.

Alternative components were also considered to address needs for a sense of arrival at the historic Dyea Townsite. These concepts were found to have merit but were dismissed at this time as outside the scope of this analysis.

Two designs for a parking lot and associated visitor services area were presented for public comment in July 2020. These designs were discarded but used as concepts while developing Alternatives 2 and 3. For more information on this community engagement, see Section 8. Consultation and Coordination.

Table 1. Summary of Alternatives

Action	Alternative 1: No Action	Alternative 2 (Proposed Action/Preferred Alternative)	Alternative 3
Day use parking for private and commercial vehicles at Chilkoot Trail arrival area	Existing informal parking for about 12 standard vehicles near the Taiya River bridge would remain. Unauthorized roadside parking and unsafe mixing of people and vehicles would continue.	A 0.7 acre visitor services area with a 0.5 acre parking lot placed south of the bridge between the road and the river would provide: 29 standard vehicle spaces, 2 dedicated accessible spaces, 2 dedicated oversize commercial spaces.	Same size visitor services area as Alternative 2, but 0.4 acre parking lot with 26 standard vehicle parking spaces, same number of other spaces, and with a different parking lot and pedestrian area shape and layout.
Overnight parking for permitted Chilkoot Trail hikers	Existing overnight parking for up to 10 standard vehicles would be retained at the Dyea campground entrance approximately one half-mile from the trailhead.	Overnight parking for permitted Chilkoot Trail hikers would be accommodated within the proposed parking lot near the trailhead, as part of the 29 standard vehicle spaces. The existing overnight parking at the campground entrance would become day-use only.	Same as Alternative 2, but as part of the 26 standard vehicle spaces.
Transportation shuttle vehicles and patrons at Chilkoot Trail arrival area	None.	The parking lot would include a dedicated pullover space for transportation shuttles to drop-off and pick-up patrons at a pedestrian shelter located on the entrance driveway.	Same as Alternative 2 but located where the entrance driveway meets the parking lot.
Day Use Visitor Service Facilities at Chilkoot Trail arrival area	Existing small pedestrian area with visitor service facilities would remain: vault toilets, trash bins, 2 benches, and no roadside locational signs.	A new pedestrian area would be constructed adjacent to the proposed parking lot with a new restroom (vault toilet), trash bins, bicycle stands, and 4 benches.	Same as Alternative 2.
Visitor Resource Interpretation at Chilkoot Trail arrival area	A kiosk for information notices and resource interpretation located near the informal parking at the trailhead would not change.	The existing kiosk would be relocated in the new pedestrian area. A river overlook would be created with 2 interpretive panels, and a new visitor contact station would have 4 interpretive panels.	Same as Alternative 2.
Iconic Chilkoot Trail Unit sign	The iconic Chilkoot Trail Unit sign would remain on the east side of Dyea Road.	The iconic Chilkoot Trail Unit sign would be placed in the new pedestrian area near the Dyea Road right-of-way.	Same as Alternative 2, but the sign would be placed within the road right-of-way at the parking lot entrance driveway.
Footpath between Campground and Chilkoot Trail arrival area	The simple footpath between the campground and the parking and visitor services at the Chilkoot Trail arrival area would not change.	A loop of the existing footpath near the campground would be widened, filled, and stabilized in order to meet accessibility standards. The existing footpath from the new loop to the new parking lot would not change.	The footpath from the campground public use area to the new parking lot would be widened, filled, and stabilized to accessibility standards. An unaltered footpath segment connecting to the campground would not change.
Campground Road Segment	Existing campground terminal road loops would remain disconnected.	Campground terminal road loops would be connected, redundant portions of loops would be revegetated.	Same as Alternative 2.

6 Affected Environment

This section discusses the existing condition of the resources that could be potentially affected by the alternatives. Information on conservation status, biology and KLGO specific data in the Wildlife and Vegetation sections are described and cited in detail in "Natural Resource Value and Vulnerabilities at a Proposed Development Site in Dyea, Klondike Gold Rush National Historical Park" (Furbish 2021).

Wildlife

Boreal Toads

The Boreal toad (*Anaxyrus boreas*) population has been monitored at KLGO from 2004 to 2020. It is a species of conservation concern at the national, state, and regional levels. The International Union on Conservation of Nature and Natural Resources (IUCN) and NatureServe, a consortium of nearly 100 organizations and over 1,000 scientists, both list the overall toad population in 2020 as declining due to human-caused habitat destruction/degradation and disease impacts, primarily chytrid fungus disease.

In 2018, the Alaska Center for Conservation Science (ACCS) and the Alaska Natural Heritage Program (AKNHP) determined Boreal toad populations in Alaska to be vulnerable due to "unknown status and either high biological vulnerability or high action need." As of 2020, NatureServe assessed the state status of Boreal toads in Alaska as S3/S4, "vulnerable / apparently secure but with cause for long-term concern." Residents of southeast Alaska coastal towns have noted toad populations declining since the 1970s (Chambert et al. 2019, Surdyk and Evans 2018). Habitat destruction or degradation and chytrid fungal disease are the most likely stressors contributing to regional decline. Large decreases in abundance and distribution of Boreal toads have been documented locally in Skagway.

The Boreal toad was selected as an important regional biological indicator species and a Secondary Vital Sign organism for the NPS Southeast Alaska Network Inventory and Monitoring Program. KLGO staff considers the Boreal toad a sentinel species whose status contributes to understanding the biological health of wetlands and their associated plants and animals. Boreal Toads have been displaced along the lower Skagway River delta due to loss of their habitat from human development, although occasional sightings of adults still occur. Dyea and the lower Taiya River now contain the only remaining undeveloped lower river delta wetland habitat to support Boreal Toads in the Skagway borough.

One of only two consistently productive and successful toad breeding wetlands in the Dyea River delta is the DY03 pond complex (Figure 2) located near the proposed Chilkoot Trail arrival area. It is the only consistently productive and successful toad breeding wetland situated on National Park Service land owned and managed by KLGO. Successful toad reproduction requires a shallow, still, warm aquatic breeding site with adjacent vegetated upland habitat where toadlets mature and non-breeding toads spend most of the year foraging.

The KLGO Boreal toad monitoring program determined that adult toads associated with wetland DY03 spend a majority of their time during the summer within a zone of approximately 100 meters (330 feet) around the pond, that toads move between the pond and a maturation wetland area across Dyea Road, and that toads move along the river to hibernation sites. New toadlets recently emerged from the water must disperse from the pond and are presumed to stay nearby due to their low energy stores. Adults and juveniles are known to disperse beyond 100 meters (330 feet) from a breeding wetland in the late summer and early fall as they begin to seek out winter hibernation sites.

The DY03 wetland is located along an abandoned river channel and was a gravel extraction site in the 1950s-60s. An off-road vehicle track ran through the wetland until about 2005. Wetlands associated with toad reproduction in Dyea are being impacted by construction activities (one core breeding wetland has been filled for a parking lot) and changing land ownership (one half of the maturation wetland across the road from DY03 is now residential lots). More land development is planned within and adjacent to KLGO (Municipality of Skagway 2020). In addition, Taiya River hydrology changes make generation of new wetlands in the Dyea river delta area less likely in the future (Curran 2020).

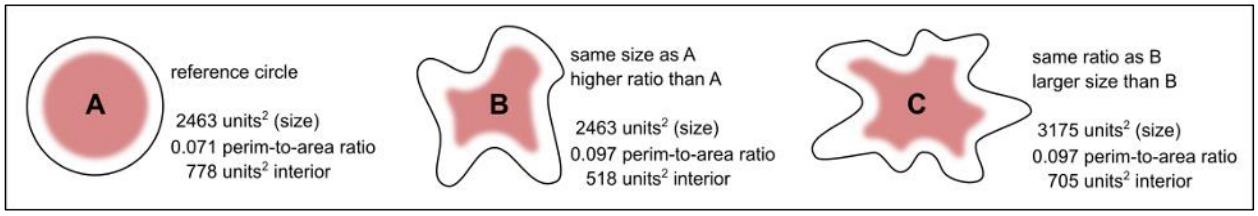
Breeding Birds

Twenty-eight (28) species of breeding birds used the proposed project area for nesting in 2020. Eleven (11) were species of conservation concern at the national or state level due to declining or vulnerable populations, primarily associated with habitat destruction. One half of breeding birds found within the area are species normally expected to nest in the interior of larger forest stands (11 species) or that usually spend most of their time in interior habitat (5 species).

The small overall size of the proposed project area means no part of the interior is far enough away from edges to be completely uninfluenced by edge-related effects. Some edge-preference species were also nesting in the interior of the project area, suggesting that the interior habitat has mixed characteristics which may make it sensitive to changes such as internal habitat fragmentation or increased edge habitat in relation to the interior.

The interior property of forest stands can be gauged by comparing their sizes and shapes (Figure 8). Size is the total area, and shape is represented by the perimeter-to-area ratio. A forest stand in the shape of a circle has the lowest perimeter-to-area ratio possible. If two stands are the same size, the one with higher perimeter-to-area ratio has less interior habitat. If two stands have the same perimeter-to-edge ratio, the one with the larger size has more interior habitat. If one stand is both smaller in size and has a higher perimeter-to-edge ratio, it has substantially less interior habitat.

Figure 8. Breeding bird perimeter-to-area ratio and interior habitat



The project area is bounded by hard edges (areas with zero vegetation or only low groundcover vegetation) on the river side and the Dyea Road side. The campground creates an understory edge on the third side of the project area, with substantial areas cleared of low vegetation, shrubs, and small trees. The preponderance of bird species using the campground area prefer edge habitat or are habitat generalists.

Bird diversity was associated with other habitat characteristics besides interior character. Some birds prefer to nest near water or wetlands, and breeding bird diversity was highest near wetland DY03. The project area has small spruce-dominated stands that attract birds that prefer to nest in conifer trees. Groundcover thickets and tangles of shrubs at the surface attract ground-nesting birds that need cover to protect their nests. The combination of these habitat features in one place was not found elsewhere in the river valley delta area of Dyea.

River Otters

River otters (*Lontra canadensis*) are semi-aquatic large mammals that do most of their hunting in the water. The proposed project area has an established otter run along the Taiya River shoreline, from a slide about 360 feet along the shore south from the Taiya River bridge, then towards the NPS campground. An otter run is a pathway worn into vegetation along a shore by frequent passage of otters, with slides for quick, easy access between water and upland. An otter was observed resting on the run and fresh otter scat was recorded along the run throughout the summer season of 2020.

River otters have large territories with multiple slides and runs. Future river shore construction projects within KLGO or along the lower Taiya River is unlikely, leaving abundant shore areas in the vicinity for otter runs.

Vegetation

The project area is dominated by cottonwood trees (*Populus tricocarpa*) that partially close the high canopy while letting sunlight through to lower levels. Young spruce trees (*Picea sitchensis*) are mixed among the cottonwoods in scattered patches. Some areas of large, mature spruce trees are found along the eastern edge and in occasional small, discrete spruce-dominated stands that fully close off the canopy. Where sunlight penetrates the high canopy, shrubs and small trees create understory layers. At ground level, sparse to complete groundcover layers develop.

Two species of orchids were found in the part of the project area proposed for a trailhead parking lot. Early coralroot (*Corallorhiza trifida*) is recorded as rare for KLGO and potentially rare in southeast Alaska. Blunt-leafed rein orchid (*Platanthera obusata*) is recorded for KLGO but without information on distribution or rarity, but is potentially rare in southeast Alaska. Both occur in other parts of the project area and may occur in other parts of Dyea.

These orchids produce extremely tiny seeds, when released from their seed pods they appear as a light dust that floats in the air. Seeds disperse in air currents, on moving water surfaces, or attached to animals. New orchids thrive where seeds land on suitable growth habitat of moist soils with beneficial fungi. Reproductive success depends upon ample supply of seeds (from established orchid

patches) and plentiful suitable growth habitat, which can include areas of moderate ground disturbance.

The great-spurred violet (*Viola selkirkii*) was found in only one patch within the project area, located within the part of the project area proposed for a Chilkoot Trail trailhead parking lot. It is unusual for the southeast Alaska region, considered vulnerable at the state level, and has not been recorded elsewhere within KLGO. This violet produces relatively large seeds which fall to the ground nearby and are sometimes dispersed further by ants. These violet patches spread slowly and do not readily disperse to form new patches within an area, making individual patches more important for the local population.

The plant communities in the project area are predominantly intact native plant assemblages with few exotic species. Invasive exotic plants are dense within the mowed area of the Dyea Road right-of-way and at the existing informal parking and small pedestrian area near the Taiya River bridge. Exotic plants are less dense, but plentiful within the campground. They are sparsely distributed along the footpath, and mostly concentrated in the footpath segment near the bridge. Scant numbers of a few exotic plants can be found along an old vehicle track in the interior and are being shaded out by recovering native understory and groundcover plants.

The overall habitat within the project area is a combination of mixed open forest, complex understory and groundcover vegetation, a variety of wetlands, and interior forest characteristics that fosters high plant and animal biodiversity and productivity. Closed forests that predominate in Dyea have lower species diversity and less productivity than open forests. Other stands of open forest in Dyea are smaller and do not have similar mixtures of tree canopy species, wetlands, and interior character.

Within Dyea, the project area habitat contains the only combination of a successful Boreal toad breeding area, three bat species that use the area with the highest activity level measured thus far for Dyea, a variety of breeding birds linked to interior character and other habitat features, eleven species of harvestable berries, harvestable mushrooms, and six species of sensitive plants (including the 3 listed above) that are potentially rare within the park.

Hydrology, Wetlands, and Floodplains

The project area is within the 100-year floodplain of the Taiya River and partially within a former river channel. During flooding, water flows onto and across the floodplain where it can deposit sediment and cause erosion where flow re-enters the main river channel. Living vegetation, woody debris, and boulders help dissipate flow energy and reduce flood impacts downstream.

Past installation of rip-rap and other measures used to protect the Taiya River bridge have reduced the ability of floodwaters to access the floodplain in the trailhead area, but flooding does occur in the campground area during high-flow events. This flooding could back up into the project area but would not have a high velocity.

Wetland mapping was conducted by the park in 2018 and none were found in the proposed parking and trailhead area. Runoff from those areas does contribute to wetlands and wetland habitats. The

area between the campground and trailhead was not mapped for wetlands in 2018, but contains former channels and other low areas that have wetland characteristics, especially where Taiya River overflow events have occurred and where seasonal groundwater levels reach the surface. These channels, last delineated as wetlands in 2000, will be treated as wetlands for the purpose of evaluating impacts.

Soils

Soils in the project area are sandy to gravelly river mineral deposits formed into a series of relatively level upland terraces that are crisscrossed by swales and ridges from previous stream channels or overflow events. A very gradual overall slope occurs from the highest point near the Taiya River bridge to the lowest in the southwest corner formed by the Taiya River meander. Wetland soils formed where frequent overflow events occurred or where groundwater reached the substrate surface at least seasonally. Human activities such as vehicle tracks and gravel mining have added to variations in ground topography and contributed to wetland formation. A shallow organic layer is typical of the site, with formation of deeper organics in wetland areas.

Recreation

Dyea is located approximately eight miles by road from Skagway, the hub for transportation and visitor services in the area. The recreation setting in the Dyea area is rustic, with basic visitor services. NPS facilities include a developed campground, day use and overnight parking, picnic sites, interpretive signs, and kiosks. Sanitation facilities include vault toilets and trash receptacles. Private-sector services in the area include lodging, dining, and private tours.

The historic Chilkoot Trail, a primary destination for many park visitors, is indicated by an iconic Chilkoot Trail Unit sign on the east side of Dyea Road, separated from visitor support features on the west side of the road. Overnight parking for hikers is located in the campground; a footpath meanders approximately one-half mile from the campground parking area to the beginning of the Chilkoot Trail.

Recreation use in the general area includes overnight camping and day uses such as hiking, biking, horseback-riding, picnicking, harvesting berries and mushrooms, bird and other wildlife watching, fishing, rafting, and exploring the history of the area. Activities provided by commercial operators with Commercial Use Authorizations include bicycling, rafting, and hiking.

Park visitors and residents of the local community place importance on special qualities of the human environment in Dyea (Municipality of Skagway 2014, Park Studies Laboratory 2013, VanDe Kamp and Seekamp 2005), including the undeveloped rural character; natural beauty; scenery and history; and a quiet, peaceful place of refuge.

Tourism numbers in Skagway have steadily increased over the years (outside of seasons impacted by the COVID-19 pandemic) creating more traffic and potential for congestion in Dyea. (Municipality of Skagway 2020). Future actions within KLGO that could affect the setting and recreation opportunities in the area include planned park development as described in the Dyea Area Plan

(Klondike Gold Rush National Historical Park 2014), changes to private or municipal lands within the park boundary, and new residential lots being developed in the area.

7 Impact Analysis

Alternative 1: No Action

Implementing the No Action alternative would retain existing facilities in the Dyea area; new facilities would not be constructed. Visitor orientation, public safety, and recreation opportunities would remain the same. Overnight parking for Chilkoot Trail hikers with permits for overnight treks would remain approximately one-half mile from the trailhead. Haphazard parking in the State of Alaska right-of-way for the Dyea Road and congestion of people and vehicles in the informal parking area would continue. Implementing the No Action alternative would not generate new effects to wildlife; soils; vegetation; hydrology, wetlands and floodplains; or recreation resources. Existing conditions would be perpetuated.

Alternative 2 (Proposed Action and Preferred Alternative)

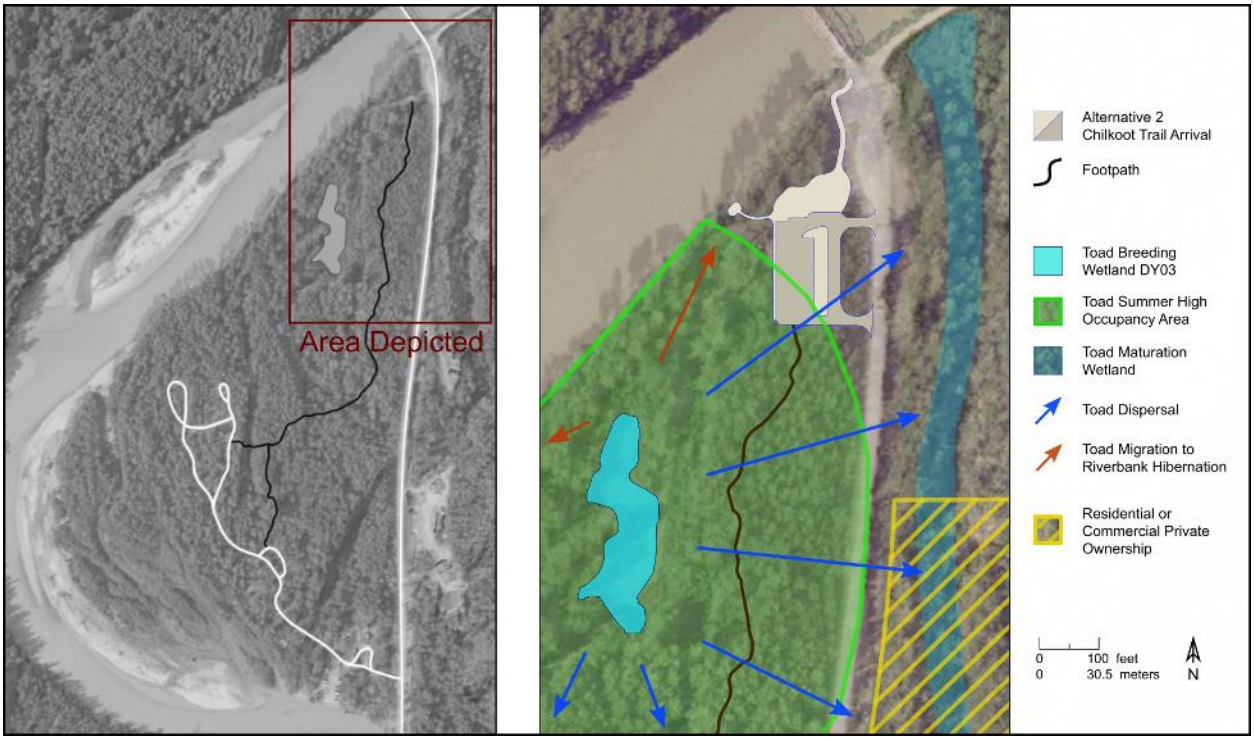
Wildlife Impacts

Boreal Toads

The Boreal toad breeding pond near the proposed parking lot is one of only two consistently successful breeding ponds in Dyea, and the only one on National Park Service land managed by KLGO in Dyea. The proposed parking and visitor services footprint would remove about 0.1 acres (4,300 square feet) on the edge of the toad summer high occupancy area (occupation zone around breeding pond). The parking lot would create a barrier of about 230 feet across the toad dispersion travelway from the pond and between the road and the river, leaving an 80-foot-wide corridor of pedestrian area between the parking lot and the river (toads move along the river to hibernation sites). However, the most direct route to the maturation wetland across Dyea Road would not be blocked by the parking lot.

The parking lot would create an area of about 0.5 acres with high potential for toad mortality due to inadvertent crushing by vehicles. Some toad mortality may occur in the pedestrian area from people and pets, but displacement would be more likely due to the slower movements and increased awareness of pedestrians vs. people in vehicles. (Figure 9)

Figure 9. Alternative 2 Arrival Area and Boreal Toad Habitat



At the campground, no change to toad impacts is expected from the new road segment. Along the approximately 570 feet of widened, filled, and compacted footpath loop near the campground, some increase in toad mortality or disturbance from increased human and pet traffic may occur. A footbridge crossing the wetland & drainage slough would cause displacement during construction but thereafter remove human traffic from the low, wet habitat below the bridge.

Construction would be timed to minimize risk of damage to Boreal toads. As described in the Dyea Area Plan Finding of No Significant Impact (Klondike Gold Rush National Historical Park 2014), construction activities would not occur within 200 yards (600 feet) of identified breeding ponds while young toads are dispersing. The first emergence of toadlets from the aquatic environment is usually within the third week of July. Juvenile toads are usually seen by the third week in August and continue to be present at least into September.

Implementation of Alternative 2 would contribute to the incremental decrease in the acreage of consistently productive toad habitat in the Dyea area and expose toads to an increased level of disturbance and potential for mortality. Boreal toads can adapt to disturbances given adequate habitat and good reproductive success rates. The toad population associated with wetland DY03 has had good breeding productivity and success rates in the past, therefore would be expected to continue to function within normal trends if their breeding wetland & adjacent upland habitat are protected and toad crushing mortality does not appreciably increase. Public outreach and education efforts would highlight toad migration seasons and encourage vehicles to operate with caution in the area.

Breeding Birds

A high diversity of breeding birds uses the proposed project area, and half of these species are associated with interior-character habitat. The proposed parking area would eliminate about 2,130 square feet of interior-character habitat and convert about 0.25 acres of interior habitat to edge habitat. The parking area would encroach to within 185 feet of the highest breeding bird diversity site near the toad breeding pond.

The size of interior habitat would be reduced from about 18.1 acres to about 17.8 acres. The perimeter-to-area ratio within the project area from the toad breeding pond north would not change appreciably from existing conditions; both ratios are about 0.0052. The slightly smaller size with the same perimeter-to-area ratio would have only a small potential to adversely affect the interior habitat character for breeding birds.

At the campground, no change to bird habitat is expected from the new road segment. The proposed footpath loop at the campground would be formed using the north and south legs of the existing footpath (Figure 7). About 170 feet of widened, filled, and compacted pathway on the north leg may have a small potential to add to campground understory edge habitat and decrease overall interior habitat. Part of the south leg is already widened under mature spruce trees with sparse ground cover, thus the estimated additional 400 feet of widened, filled, and compacted pathway in this segment is unlikely to add to campground edge habitat.

Construction activities would not occur when breeding birds are present, from mid-April to mid-July. Implementation of Alternative 2 would cause a small decrease in interior habitat size and a small increase of the perimeter-to-edge ratio of interior habitat in the proposed project area. The effect of these changes is unlikely to change overall interior bird habitat.

River Otters

River otters use a shore berm run that starts near the proposed location of a river overlook. A slide used by otters to move from shore to water located at the start of the run, and some small part of the run, would be removed by the overlook. River otters have large territories containing numerous runs, therefore would not individually be harmed by these changes. However, river otters may be displaced from a part or all of this particular run.

The campground and footpaths are not frequented by river otters, and therefore the proposed trail modifications are unlikely to affect them. Construction activities within the project area are unlikely to affect river otters as they can and do easily move to other locations within their large territorial ranges. Implementation of Alternative 2 may displace or reduce river otter use of the project area.

Vegetation Impacts

Vegetation in the proposed project area is primarily open cottonwood forest with a patchy mosaic of understory and landcover plant communities. Patches of three sensitive plant species occur in the proposed parking and visitor services area, the great-spurred violet and two orchids: the early

coralroot and the blunt-leafed rein orchid. No substantial patches of sensitive orchid species were found in the locations of the campground road segment or the proposed changes to the footpath.

The violet occurs in one patch along the footpath where it would be eliminated by the proposed parking lot. In order to retain this violet population, the violets in the patch would be transplanted to 2 to 4 separate locations of similar habitat within the proposed project area prior to construction activity. Careful selection of transplantation sites, lifting beds of complete root zones, and timing the move to occur in late summer-early fall when plants are dormant will allow the highest potential for successful transplantation.

The two orchid species occur together in one patch that would be eliminated by the proposed parking lot. Orchid life cycles make attempting to transplant the orchids in this patch impractical. However, other patches of both species have been found within the project area. These patches would be unimpacted by proposed changes, thus serving as seed sources and assuring that these species continue to be part of area plant communities.

About 9 to 12 large diameter trees and about 0.5 acres of understory and ground cover plant communities would be removed at the proposed parking and visitor services area. The campground road segment would remove 3 trees and about 760 square feet of understory and ground cover, but revegetation of the redundant terminal road loops would create about 1,700 square feet of native vegetation in conjunction with monitoring & control to prevent invasive exotic plants. Along the new footpath loop near the campground, vegetation would be cleared from about 2,040 square feet (570 feet of altered pathway, minus 60 foot bridge, multiplied by 2 foot width cleared of vegetation on each side).

Invasive exotic plant species have the potential to alter plant communities if conditions favor exotic species over native vegetation, leading to diminished ecological functioning of native vegetation. Construction of the proposed parking and visitor services area would increase exposure of native plant communities in the vicinity to sources of invasive exotic plants, primarily by creating about 0.2 acres of new planting likely to foster invasive exotic plants within the mowed state road right-of-way. Changes to footpath use patterns that favor invasive exotic species, such as increased foot traffic increasing size and frequency of disturbance, combined with increased exposure to exotic plant seeds or other reproductive parts, could lead to increased incursions of invasive plants in to interior areas that are presently stable or recovering from past exposure to invasive plants. An ongoing invasive exotic plant control effort may reduce the impact of a new source area and a more susceptible pathway through the interior.

The project area exhibits a combination of habitat features not found elsewhere in the lower river delta of Dyea. The mix of cottonwood with cottonwood-spruce open forest, complex understory and groundcover vegetation, a variety of wetlands, and interior forest characteristics fosters plant and animal biodiversity and productivity, including numerous harvestable berries and mushrooms. The proposed Chilkoot Trail arrival area changes and the footpath loop created at the campground would slightly diminish the area of habitat but are unlikely to cause major changes to the plant communities

and overall habitat character in the proposed area if paired with an active invasive exotic plant control effort.

Hydrology, Wetlands, and Floodplain Impacts

The proposed action would remove 0.7 acres of mixed forest, shrub, and herbaceous vegetation from the floodplain at the Chilkoot Trail arrival area and replace it with a gravel surface, reducing erosional resistance during flooding. Revegetation of 0.2 acres of the existing gravel parking area would restore limited resistance to flood velocity and erosion. The Dyea Road would be the preferred pathway for floodwaters above the bridge water and water would be directed onto the proposed parking lot driveways and parking lots. The proposed vegetation removal would not have a measurable effect on overall flow velocity or volume. None of the proposed actions would reduce the ability of the river to occupy the floodplain or alter its geometry.

The proposed actions would relocate the short-term overnight parking/staging area for permitted Chilkoot Trail hikers from the 10-year floodplain to the 500-year floodplain and would reduce the general flood risk to facilities. NPS assets including the vault toilet and trash facilities, orientation kiosk, interpretive panels/waysides, and river overlook would be at a slight risk from flooding due to their location in the 500-year flood plain. There are no alternative locations available since the historic Chilkoot Trail begins on the floodplain.

The proposed action would remove 0.7 acres of vegetated buffer between the parking area and downslope wetland areas. Increased vehicle occupancy would increase the risk of oil, antifreeze, and other related contamination to these wetland areas. A footbridge would be constructed over the about 60 foot wide wetland and drainage area in the loop trail adjacent to the campground. The bridge would have partially buried wood abutments, supported on helical ground screws at abutments and one center support, with yellow cedar decking. This construction would minimize impacts to wetlands and wetland functions.

Implementation of Alternative 2 would remove vegetation from the Taiya River floodplain and would provide hardened pathways for floodwaters. The proposed development includes only minor structures and there is little risk of substantial capital investment loss due to flooding. Overall hydrology, wetland, and floodplain functions and values would not be measurably altered.

Soil Impacts

At the Chilkoot Trail arrival area, about 0.5 acres of soil with an organic layer would be replaced with packed gravel and dirt. At the campground approximately 1,120 square feet (less than 0.1 acre) of soil with an organic layer would be converted to the new road segment connecting the terminal loops of the campground road.

A new footpath loop would be formed from the north and south legs of the existing footpath near the campground, with a footbridge spanning about 60 feet of wetland soils. The pathway would be widened from 1 - 2 feet to 4 feet with vegetation and organic soil removed, and with vegetation removed for an additional foot on either side, except under the footbridge. Along the length of

footpath that is altered approximately 2,040 square feet (less than 0.1 acre) of soil with an organic layer would be replaced with fill and a compacted surface. A footbridge would maintain natural hydrologic processes.

The proposed facilities would incrementally increase the area of compacted and altered soils within the Dyea area but would not foster erosion or degradation of soil function in the vicinity of the facilities.

Recreation Impacts

The proposed action would introduce new facilities and alter existing facilities in the Dyea area; however, simple facility designs would retain the rustic recreation setting rather than introducing stylistically different features. Trailhead parking, interpretive media, and additional signs would aid visitor orientation and provide for a sense of arrival at the historic Chilkoot Trail. Types of recreation uses would not likely be altered due to the changes in available facilities; all proposed facilities support existing recreation uses.

Levels of recreation use may change with implementation of the proposed action. Overnight Chilkoot Trail hikers are limited by numbers of permits and would not change. The capacity of the Dyea Campground would remain the same. However, overnight parking and trailhead day-use parking, presently separated, would be combined which may lead to greater congestion in the arrival area. Also, demand for more commercial tours and shuttles, and greater access for independent visitors could increase with the larger capacity parking area and the trend for higher capacity cruise ships (once COVID-19 protection measures allow cruise ship tourism to resume).

Other proposed recreation facilities are not likely to change levels of recreation use. The proposed facilities would better manage existing use levels, address visitor service needs, and reduce haphazard parking along the Dyea Road.

The proposed campground road segment would better accommodate larger vehicles that have increasingly used this area since Dyea Road improvements were completed in 2015. Creation of an accessible footpath loop near the campground would expand visitor opportunities to experience a southeast Alaskan open forest. Changes to these facilities in and near the campground would provide additional recreation opportunities for day hikes, viewing scenery, photography, and engaging in self-guided interpretation.

The sense of undeveloped rural character of Dyea and the setting of natural beauty, scenery, and history would be preserved at the parking and visitor services area by maintaining a screen of native vegetation plantings along the road and river edges. The sense of a quiet and peaceful place of refuge would also be protected through vegetative screening. Unchanged parts of the footpath would help preserve an immersive forest experience within the project area, while the modified sections of the footpath provide an accessible route through the forest that diversifies recreation opportunities. During construction, these qualities would be adversely affected but would return post-construction. Alternative 2 would incrementally alter the recreation setting and opportunities in the Dyea area but is not expected to shift it away from a rural character.

Alternative 3

Wildlife Impacts

Boreal Toads

Impacts to Boreal toads would be similar to Alternative 2 but to a smaller extent. The proposed parking lot and visitor services footprint would remove about 0.1 acres (4,350 square feet) of summer high-use toad habitat, similar to Alternative 2. The parking lot would create a barrier between the road and the river across the toad dispersion travelway from the pond of about 220 feet (rather than 230 feet) and leave a 120 foot wide corridor (rather than 80 feet) of pedestrian area between the parking lot and the river (toads move along the river to hibernation sites). The parking lot would create an area of about 0.4 acres (rather than 0.5 acres) with high potential for toad mortality due to inadvertent crushing by vehicles. As with Alternative 2, the most direct route to the maturation wetland across the Dyea Road would not be blocked by the parking lot.

A new road segment in the campground is as described in Alternative 2 and is not expected to impact toads. However, approximately 1,620 feet of widened, filled, and compacted footpath running the length of the proposed project area from the campground to the parking lot would cut through about 630 feet of the summer high-use area for toads, increasing toad exposure to mortality or disturbance from predators and increased human and pet traffic along that pathway. The pathway would also create another hazard to toads attempting to move to or from the maturation wetland across the Dyea Road compared to the unaltered footpath in Alternative 2 which would not increase exposure of toads to risks along the pathway.

Breeding Birds

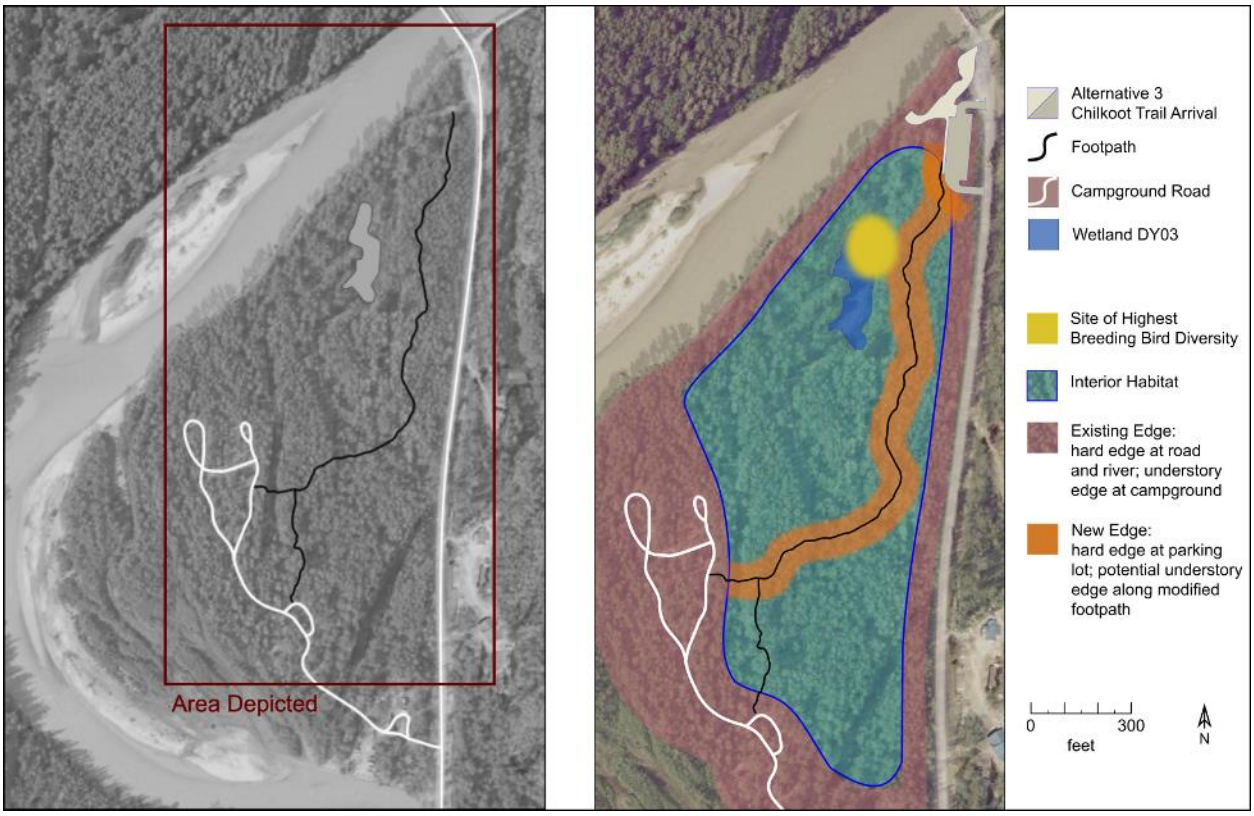
Impacts to bird interior habitat would be similar to Alternative 2 but different in extent. The proposed parking area would eliminate about 610 square feet (compared to 2130 square feet) of interior character habitat and convert about 0.21 acres (compared to 0.25 acres) of interior habitat to edge habitat. The highest breeding bird diversity site near the toad breeding pond would be about 210 feet (compared to about 185 feet) distant from the parking lot.

The size of interior habitat would be reduced from about 18.1 acres to about 17.8 acres, a loss of 0.3 acres, the same as with Alternative 2. The perimeter-to-area ratio within the project area from the toad breeding pond north would not change appreciably from existing conditions, both ratios are about 0.0052. The slightly smaller size with the same perimeter-to-area ratio would have only a small potential to adversely affect the interior habitat character for breeding birds. These are the same results as found in Alternative 2.

As with Alternative 2, no change to bird habitat is expected from the new road segment in the campground. The approximately 1,620 feet of widened, filled, and compacted footpath from the campground to the parking lot has the potential to become a functional understory edge for breeding birds, similar to the campground, which could fragment the interior breeding bird habitat for birds using those vegetative layers (Figure 10). If this occurs, interior habitat would be reduced to two

stands: one of about 9 acres with a perimeter-to-area ratio of 0.077, and one of about 5 acres with a perimeter-to-edge ratio of 0.0096. The combination of smaller sizes and larger perimeter-to-area ratios of the stands could remove interior character habitat for most breeding birds from the project area. Without interior character bird habitat, up to half of the breeding birds currently nesting in the area may abandon the site.

Figure 10. Alternative 3 Potential for Footpath Modifications to Fragment Breeding Bird Habitat



River Otters

Impacts to river otters would be the same as described for Alternative 2.

Vegetation Impacts

Impacts to sensitive plants in the proposed project area would be the same as described for Alternative 2. Other vegetation changes at the Chilkoot Trail arrival area include removal of 10-11 large diameter trees and 0.4 acres of understory and ground cover plant communities, about the same number of trees and slightly less acres of plant removal compared to Alternative 2.

Impacts from the new campground road segment would be the same as in Alternative 2. The widened, filled and compacted the footpath from the campground to the parking lot would remove 6,360 square feet of native vegetation (1,650 feet of altered pathway, minus 60 foot bridge,

multiplied by 2 foot width cleared vegetation on each side) compared to the campground footpath loop with 2,040 square feet under Alternative 2.

Construction of the proposed parking and visitor services area would increase exposure of native plant communities in the vicinity to sources of invasive exotic plants, primarily by creating about 0.2 acres of new exotic plant seed source area within the mowed state road right-of-way. Changes to footpath use patterns described under Alternative 2 would be similar, although a wider, firmer path may promote increased foot traffic. The widening and compacting the footpath through the interior would also create an area more favorable to exotic plants and less conducive to native plants. Combined, these factors would likely lead to higher incursion of invasive plants into interior areas that are presently stable or recovering from past exposure to invasive plants. An ongoing invasive exotic plant control effort may reduce the impact of a new source area and a more susceptible pathway through the interior, but is less likely to be successful with the added element of a physically altered footpath through the interior.

The project area exhibits a combination of habitat features not found elsewhere in the lower river delta of Dyea. The mix of cottonwood with cottonwood-spruce open forest, complex understory and groundcover vegetation, a variety of wetlands, and interior forest characteristics fosters plant and animal biodiversity and productivity, including numerous harvestable berries and mushrooms. The proposed Chilkoot Trail arrival area and the altered footpath through the interior would diminish the area of habitat and encourage more invasive plant intrusion, which has potential to alter plant communities and overall habitat character in the proposed area. The potential for habitat impacts and invasive plant incursion via the footpath is greater than in Alternative 2.

Hydrology, Wetland and Floodplain Impacts

The proposed action would remove 0.7 acres of mixed forest, shrub, and herbaceous vegetation from the floodplain and replace it with a hardened surface, reducing erosional resistance during flooding. Revegetation of 0.2 acres of the existing gravel parking area would restore limited resistance to flood velocity and erosion. The Dyea Road would be the preferred pathway for floodwaters above the bridge water and water would be directed onto the proposed parking lot access roads and parking lots. The proposed vegetation removal would not have a measurable effect on overall flow velocity or volume. None of the proposed actions would reduce the ability of the river to occupy the floodplain or alter its geometry.

The proposed actions would relocate the short-term primary parking/staging area for visitors hiking the Chilkoot Trail from the 10-year floodplain to the 500-year floodplain and would reduce the general flood risk. NPS assets including the new toilet and trash facilities, orientation kiosk, interpretive panels/waysides, river overlook would be at risk from flooding. There are no alternative locations available since the Chilkoot Trail begins on the floodplain.

The proposed action would remove 0.7 acres of vegetated buffer between the parking area and downslope wetland areas. Increased vehicle occupancy would increase the risk of oil, antifreeze, and other related contamination to these wetland areas. A footbridge would be constructed over the wetland area of the footpath connecting from the campground to the trailhead. The bridge would

have partially buried wood abutments, supported on helical ground screws at abutments and one center support, with yellow cedar decking. This construction would minimize impacts to wetlands and wetland functions.

Implementation of Alternative 3 would remove vegetation from the Taiya River floodplain and would provide hardened pathways for floodwaters. The proposed development includes only minor structures and there is little risk of substantial capital investment loss due to flooding. Overall hydrology, wetland, and floodplain functions and values would not be measurably altered.

Soil Impacts

Impacts to soils would be similar to Alternative 2 but with a smaller extent at the Chilkoot Trail arrival area. The proposed parking and visitor services area would replace about 0.4 acres (compared to 0.5 acres under Alternative 2) of organic layer soil with packed gravel and dirt. Impacts associated with the campground road segment would be the same as in Alternative 2.

The footpath from the campground to the proposed parking lot, approximately 1,620 feet long, would be widened, filled, and compacted, with a footbridge near the campground spanning about 60 feet of wetland soils. Along the pathway, approximately 6,360 square feet of organic soil with an organic layer would be replaced with fill and a compacted surface, compared to 2,040 square feet in Alternative 2.

The proposed facilities would increase the area of compacted and altered soils within the Dyea area incrementally more than Alternative 2 but would not foster erosion or degradation of soil function in the vicinity of the facilities.

Recreation Impacts

Impacts to recreation uses and setting in the project area would generally be the same as described for Alternative 2. However, this alternative could diminish the immersive forest experience due to the widened, filled, and compacted footpath from the campground to the proposed parking lot. The footpath would be susceptible to invasive exotic plants, which have the capacity to change plant communities along the pathway. If changes to the footpath fragment interior bird and plant habitat, opportunities for watching and hearing breeding birds, and viewing and harvesting diverse plants, in the project area may decrease. Combined, these changes would reduce the unique feeling of experiencing a natural southeast Alaskan forest.

Table 2. Summary of Impacts

Issue	Alternative 1: No Action	Alternative 2: (Proposed Action and Preferred Alternative)	Alternative 3:
Wildlife: mortality, disturbance, displacement, habitat reduction degradation or fragmentation.	**Toads:** No new impacts, ongoing impacts of mortality and displacement due to existing use.	*--- at arrival site* 0.1 acres of summer high-use toad habitat removed. 230 feet of dispersion barrier created by parking lot. 80 foot wide corridor between parking lot and river. 0.5 acres of vehicle movement area (parking lot & driveways) with high crushing mortality risk. *--- at footpath change areas* 570 feet of altered pathway near existing campground does not increase cross migration route area. no altered pathway within summer high-use habitat or crossing dispersion routes to maturation wetland.	*--- at arrival site* 0.1 acres of summer high-use toad habitat removed. 220 feet of dispersion barrier created by parking lot. 120 foot wide corridor between parking lot and river. 0.4 acres of vehicle movement area (parking lot & driveways) with high crushing mortality risk. *--- at footpath change areas* 1,620 feet of altered pathway crosses entire migration route area except riverside corridor. 630 feet of altered pathway within summer high-use habitat and across dispersion routes to maturation wetland.
	Birds: No new impacts, breeding bird habitat would not change, 18.1 acres of interior habitat, 0.0052 ratio of perimeter to area for interior habitat (smaller ratio is better than larger ratio for habitat integrity).	*--- at arrival site* 2,130 square feet of interior habitat removed. 0.25 acres of interior habitat converted to edge habitat. 17.8 acres of interior habitat 0.0052 ratio of perimeter to area for interior habitat. *--- at footpath change areas* 170 feet of altered pathway with potential to add to campground edge habitat, but unlikely to change perimeter to edge ratio. 570 feet of altered pathway unlikely to add to campground edge habitat or change perimeter to edge ratio.	*--- at arrival site* 610 square feet of interior habitat removed. 0.21 acres of interior habitat converted to edge habitat. 17.8 acres of interior habitat 0.0052 ratio of perimeter to area for interior habitat. *--- at footpath change areas* 1,620 feet of altered pathway through interior with potential to become understory edge for birds, which could fragment interior habitat into two smaller stands: 8.6 acres with 0.0077 ratio 4.9 acres with 0.0096 ratio resulting in probable loss of interior habitat for birds.
	Otters: No new impacts, use of existing river otter run would remain the same.	*--- at arrival site* likely to be displaced from otter run.	*--- at arrival site* likely to be displaced from otter run.

Issue	Alternative 1: No Action	Alternative 2: (Proposed Action and Preferred Alternative)	Alternative 3:
Vegetation: sensitive species, removal, invasive exotic plants expansion, habitat quality.	**Sensitive Species:** No new impacts, one patch of 2 sensitive orchid species would remain in place, one patch of a sensitive violet species would remain in place.	*--- at arrival site* one patch of 2 sensitive orchids would be removed, unlikely to affect orchid populations in vicinity. one patch of sensitive violets would be removed, mitigated by transplanting before construction.	*--- at arrival site* same as Alternative 2.
	Vegetation Removal: No new impacts.	*--- at arrival site* 9-12 large-diameter trees removed. 0.5 acres of vegetation removed. 0.2 acres of bare road right-of-way revegetated. *--- at campground new road* 9-12 large-diameter trees removed. 760 square feet of vegetation removed. 1,700 square feet revegetated. *--- at footpath change areas* 2,040 square feet of vegetation removed.	*--- at arrival site* 10-11 large-diameter trees removed. 0.4 acres of vegetation removed. 0.2 acres of bare road right-of-way revegetated. *--- at campground new road* same as Alternative 2. *--- at footpath change areas* 6,360 square feet of vegetation removed.
	Invasive Exotic Plants Expansion: Ongoing impacts of increasing pressure from invasive plants due to higher concentration of seeds at road edges and higher vehicle and pedestrian traffic throughout area.	*--- at arrival site* 0.2 acres of bare road right-of-way revegetated likely to become seed source for invasive exotic plants. *--- at campground new road* 1,700 square feet revegetated, unlikely to become seed source with management to control exotics. *--- at footpath change areas* 2,040 square feet of vegetation removal increases susceptibility of area near campground to invasive exotic plants.	*--- at arrival site* same as Alternative 2. *--- at campground new road* same as Alternative 2. *--- at footpath change areas* 6,360 square feet of vegetation removal increases susceptibility of project area interior to invasive exotic plants.

Issue	Alternative 1: No Action	Alternative 2: (Proposed Action and Preferred Alternative)	Alternative 3:
	Habitat Quality: No new impacts.	--- *at arrival site* diminished habitat at arrival site is unlikely to affect overall habitat. --- *at footpath change areas* diminished habitat near campground unlikely to affect overall habitat.	--- *at arrival site* diminished habitat at arrival site is unlikely to affect overall habitat. --- *at footpath change areas* diminished habitat at altered footpath through the interior may affect overall habitat.
Hydrology, Wetlands and Floodplains: **surface flooding,** **facilities flood risk,** **wetlands**	**Surface Flooding:** No new impacts.	--- *at arrival site* 0.5 acres of vegetation removal reduces erosional resistance. 0.2 acres of revegetation restores limited erosional resistance. --- *overall* no measurable change in overall flow velocity or volume. no reduction in floodplain occupation or geometry.	--- *at arrival site* 0.4 acres of vegetation removal reduces erosional resistance. 0.2 acres of revegetation restores limited erosional resistance. --- *overall* no measurable change in overall flow velocity or volume. no reduction in floodplain occupation or geometry.
	Facilities Flood Risk: No change, facilities near bridge in 500-year floodplain, overnight parking at campground entrance in 10-year floodplain.	--- *at arrival site* facilities in 500-year floodplain. overnight parking moved from 10-year floodplain to 500-year floodplain.	--- *at arrival site* same as Alternative 2.
	Wetlands No new impacts.	--- *at footpath crossing at campground slough* bridge design will minimize impacts to wetlands and wetland functions	--- *at footpath crossing at campground slough* bridge design will minimize impacts to wetlands and wetland functions
Soils: **removal,** **alteration,** **wetland.**	No new impacts.	--- *at arrival site* 0.05 acres of organic soils removed. --- *at campground new road* 760 square feet of organic soils removed. --- *at footpath change areas* 2,040 square feet of organic soils removed.	--- *at arrival site* 0.04 acres of organic soils removed. --- *at campground new road* same as Alternative 2 --- *at footpath change areas* 6,360 square feet of organic soils removed.
Recreation: **facilities,** **visitation,** **accessibility,** **setting.**	**Facilities:** No change to facilities, no arrival site for Chilkoot Trail, no formal parking lot and minimal visitor services at bridge.	Creation of the Chilkoot Trail arrival site improves facilities to support all users with a formal parking area and expanded visitor service facilities.	Same as Alternative 2.

Issue	Alternative 1: No Action	Alternative 2: (Proposed Action and Preferred Alternative)	Alternative 3:
	Visitation: Capacity to accommodate users unchanged, crowding may increase but will be limited by lack of parking & services.	*--- at arrival site* creation of the formal parking area with visitor services expands the capacity to accommodate users, congestion may increase with combined overnight and day-use parking at the arrival area. *--- at footpath change areas* traffic may increase along the improved footpath loop at the campground. to a lesser extent, traffic may increase along the unaltered footpath through the interior.	*--- at arrival site* same as Alternative 2. *--- at footpath change areas* traffic may increase to a greater degree along the improved footpath through the interior.
	Accessibility: Accessible facilities at the campground and the minimal facilities near the bridge and connected via the Dyea Road would not change, no accessible footpath through the forest would be provided.	*--- at arrival site* dedicated accessible parking would be created. accessible facilities would be expanded. *--- at footpath change areas* a new accessible loop pathway through the forest would connect the two areas of accessible campsites. *--- overall* connection between the accessible campground and the accessible arrival site would be via the Dyea Road.	*--- at arrival site* same as Alternative 2. *--- at footpath change areas* a new accessible pathway through the forest interior would lead from the campground to the arrival parking lot. *--- overall* connection between the accessible campground and the accessible arrival site would be via the Dyea Road and via the improved footpath.
	Setting: The undeveloped rural character, scenic beauty, peaceful refuge, and natural and historical setting would continue to be influenced by greater Dyea changes, but not by changes in the project area.	*--- at arrival site* the parking lot and visitor service areas will be screened as much as possible by vegetation along the road and along the river, increased crowding may affect the visitor experience. *--- at footpath change areas* the unaltered footpath through the interior will continue to provide an immersive forest experience.	*--- at arrival site* same as Alternative 2. *--- at footpath change areas* the altered footpath through the interior may degrade the immersive forest experience.

8 Consultation and Coordination

The park consulted with the State Historic Preservation Office (SHPO) regarding archeology in the area starting in 2019. The SHPO concurred with the park's finding of no adverse effect to historic properties on 12 April 2021.

The park began Tribal Consultation with the Chilkat Indian Village, Chilkoot Indian Association, and Skagway Traditional Council on 26 September 2019. Consultation concluded with the Skagway Traditional Council on 3 May 2021. Consultation continues with the Chilkat Indian Village and the Chilkoot Indian Association with the distribution of this Environmental Assessment.

Prior to initiating this Environmental Assessment, the park invited public comment from 15 July to 15 August 2020 to solicit feedback on conceptual designs for the proposed action. At that time, two designs were presented for a parking lot and associated visitor services at the Chilkoot Trail arrival area: "curved" and "linear".

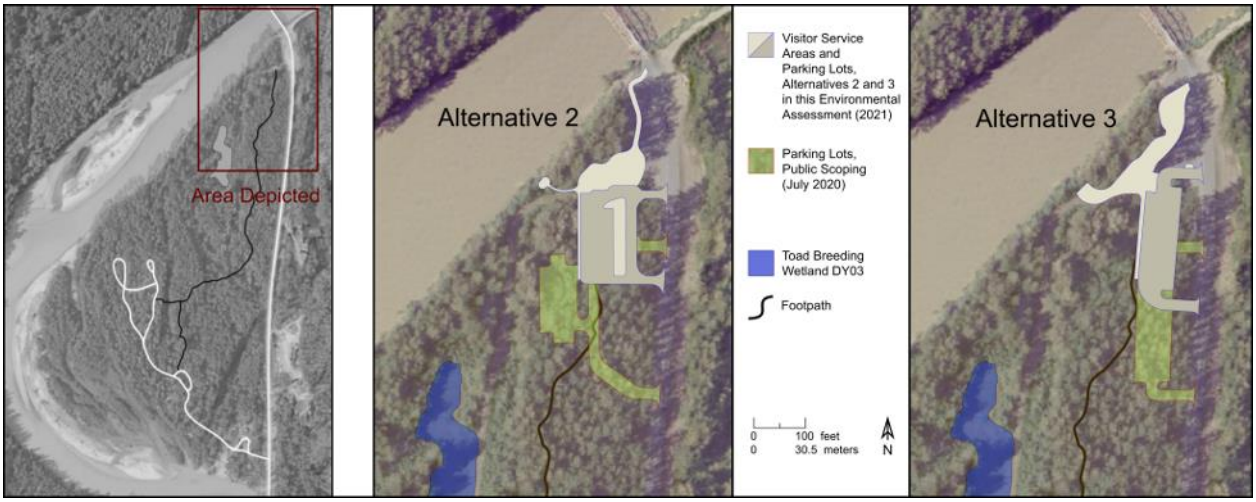
Thirteen comments were received. Eight respondents commented that parking improvements were needed, and one felt improvements weren't needed. Regarding addressing the need for parking improvements with a new parking lot, eight (8) did not see a need for a new parking lot, three (3) did see the need, and one (1) felt that a new parking lot should be considered later.

Respondents' first preferences were for: neither design (6), the curved design (2), the linear design (4), and one preferred a modified linear design.

Seven respondents expressed concerns about impacts to the beauty, setting, and refuge qualities of the area. Other valued uses were nature appreciation (6 comments), recreation (3), harvest (3), and bird watching (2).

In response to these comments and other resource impact considerations, the proposed Chilkoot Trail arrival area developments were moved and reconfigured (Figure 11).

Figure 11. Alternatives 2 and 3 Compared to July 2020 Preliminary Designs



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Appendix A: ANILCA Section 810(A) Subsistence – Summary Evaluation and Findings

I. Introduction

This section was prepared to comply with Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act. It summarizes the evaluation of potential restrictions to subsistence activities that could result from the construction of new facilities in support of facility improvements the Dyea Campground within Klondike Gold Rush National Historical Park (KLGO).

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."*

Klondike Gold Rush National Historical Park was established on June 30, 1976 to "preserve in public ownership for the benefit and inspiration of the people of the United States, historic structures and trails associated with the Klondike Gold Rush of 1898." The park is located within two National Historic Landmark boundaries: the Skagway and White Pass District National Historic Landmark, formally designated on June 13, 1962, and the Chilkoot Trail and Dyea National Historic Landmark, formally designated on June 16, 1978. The taking of fish and wildlife or other subsistence uses is not authorized within Klondike Gold Rush National Historical 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

A. Alternative 1 – No Action

The No Action alternative would continue the existing situation. Parking at the trailhead would remain informal, unmanaged, and impinge on a State of Alaska right-of-way. Parking for overnight trail hikers would remain at the campground entrance, about one-half mile from the trailhead. Enhanced visitor services, Chilkoot Trail arrival orientation, and improved cultural and natural interpretation would not be provided. The decorative Chilkoot Trail Unit sign would remain on the east side of the Dyea Road. The road segment within the campground would not be relocated and the footpath between the campground and trailhead would not be altered.

B. Alternative 2 (Proposed Action and Preferred Alternative)

Alternative 2 would create a sense of arrival for the Chilkoot Trail by constructing a new visitor service area south of the Taiya River bridge and west of Dyea Road. A new parking area would provide parking for private and commercial day use visitors, and overnight parking for permitted trail hikers. The main parking lot would include spaces for 29 standard vehicles, 2 vehicle spaces to accommodate people with disabilities, and parking for 2 oversize commercial vehicles. A transportation shuttle drop-off and pick-up area with nearby weather shelter would also be created along the entrance driveway.

The pedestrian services area would include new amenities such as a new restroom (vault toilet), wayfinding signs, bike racks, and trash facilities. A new visitor contact station with 4 interpretive panels would be constructed. The decorative Chilkoot Trail sign would be placed in the pedestrian area near the Dyea Road right-of-way, and a path leading to a road crossing near the bridge would be delineated. The footpath leading from the campground to the new visitor service area near the bridge would be altered to create an accessible loop near the campground. Areas no longer used for services would be revegetated with native plants.

A new road segment connecting the two terminal loops of the campground road would be constructed, and redundant sections of the loops would be revegetated. The existing overnight parking area at the campground entrance would become a day-use only parking area.

C. Alternative 3

Alternative 3 would also construct a new visitor service area near the bridge. This design differs from Alternative 2 in shape and placement. The amenities, trail connections, and sign locations would be similar to Alternative 2. Please see the Table 1 and the narrative in the EA for additional details regarding the three alternatives.

IV. Affected Environment

The proposed project would occur within the Klondike Gold Rush National Historical Park, which is closed to subsistence uses. The proposed project is also not expected to significantly restrict subsistence uses on other federal lands adjacent to Klondike Gold Rush National Historical 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:

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

A. The potential to reduce populations:

The proposed project would not significantly reduce populations of subsistence fish and wildlife resources. There is no Title VIII subsistence use authorized in the proposed area. No impacts are anticipated on subsistence use activities or fish and wildlife populations on adjacent federally managed lands.

B. Restriction of Access:

The proposed action is not expected to limit or significantly restrict the access of subsistence users to natural resources on other adjacent federal lands where Title VIII subsistence is authorized.

C. Increase in Competition:

The proposed action 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 Dyea Campground and Chilkoot Trail Trailhead area. It has been determined that no other federally managed lands would meet the needs for this project.

VII. Alternatives Considered

Three alternatives were analyzed for this project and are described in detail in the Environmental Assessment (EA). All alternatives occur within the same area of Klondike Gold Rush National Historical Park, where Title VIII subsistence uses are not authorized. None of the alternatives would significantly restrict subsistence uses on other adjacent federally managed lands.

VIII. Findings

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