National Park Service
U.S. Department of the Interior

Denali National Park and Preserve
Alaska

FINDING OF NO SIGNIFICANT IMPACT
Nenana River Trails Environmental Assessment

Recommended:

BROOKE MERRELL Digitally signed by BROOKE MERRELL Date: 2023.03.31 13:52:12 -08'00'

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1. Introduction

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared an Environmental Assessment (EA) to examine alternative actions and environmental impacts associated with the development of trails in the Nenana River corridor area of Denali National Park and Preserve (the park). Action is needed to provide a variety of visitor recreational opportunities in this easily accessible, frontcountry, non-wilderness area of the park originally outlined in the *1997 Frontcountry Development Concept Plan* (NPS, 1997; NPS, 2006b). In addition to expanding what is available to park visitors, these trails are also needed to enhance multimodal connections to the park and increase universally accessible recreational opportunities in Denali as described in the *2018 Long Range Transportation Plan* (NPS, 2018).

The statements and conclusions reached in this finding of no significant impact (FONSI) are based on documentation and analysis provided in the EA and associated decision file. Relevant sections of the EA are incorporated by reference below. The EA is available online at https://parkplanning.nps.gov/nenanarivertrails.

The public was provided two opportunities to comment on the planning process. Initial broad-scope ideas for recreational facility development in this area of the park were presented to the public during October and November 2021 prior to the initiation of NEPA compliance processes. The EA was released for public review on March 1, 2023, and was open for comment through March 30, 2023. A summary of public comments received on the EA and responses from the NPS are provided in Appendix B of this document.

2. Selected Alternative and Rationale for the Decision

The NPS analyzed four alternatives in detail in the EA. Based on this analysis, the NPS selected Alternative 2 – Construct Multiuse and Hiking Trails (the NPS preferred alternative) because it best meets the purpose and need for action without causing significant impacts on park resources. The selected alternative is described in detail in Chapter 5 of the EA and is summarized below.

The selected alternative will develop approximately 17 miles of trail near the Nenana River in the park. Of this total, approximately eight miles will be a multiuse trail open to both pedestrians and bicyclists. This trail will be approximately eight feet wide and will primarily have a crushed gravel surface.

If constructed prior to the realignment of the Alaska Railroad in this area, the northern section of multiuse trail from approximately mile 234 to mile 236 of the Parks Highway would involve a crossing of the Alaska Railroad and would be in or close to the Alaska Department of Transportation & Public Facilities (DOT) right of way for approximately two miles. The crossing of the Alaska Railroad and use of the DOT right of way would require permits from both agencies.

If the railroad were realigned in this area during or shortly after project implementation, the multiuse trail would occupy the former railroad alignment through the project area.

The remaining approximately nine miles of trail will be open to pedestrians only and will be approximately one to two feet wide with a primarily natural surface. Trails will be built to accessibility standards per the Architectural Barriers Act (ABA) to the extent feasible from each trailhead. The southernmost approximately one mile of hiking trail will create a two-mile universally accessible loop when combined with the southernmost mile of the multiuse trail.

A bridge accommodating both bicycles and pedestrians will cross Riley Creek and connect the trails to the Riley Creek day use area. Additional site-specific compliance based on final design will be required for the bridge prior to implementation.

In addition to wayfinding signage on the trails, there may be other facilities constructed along the trails, including benches, interpretive signs, or overlook areas. These additional facilities would be concentrated near trailheads and will require additional site-specific compliance if implemented.

All trails will be open for their respective day uses year-round. Overnight camping will continue to be prohibited.

Commercial use will be allowed on the trails under existing laws, NPS policies, and park planning documents. Any new commercial uses that may be proposed in the future will be evaluated by standard park compliance and commercial services processes.

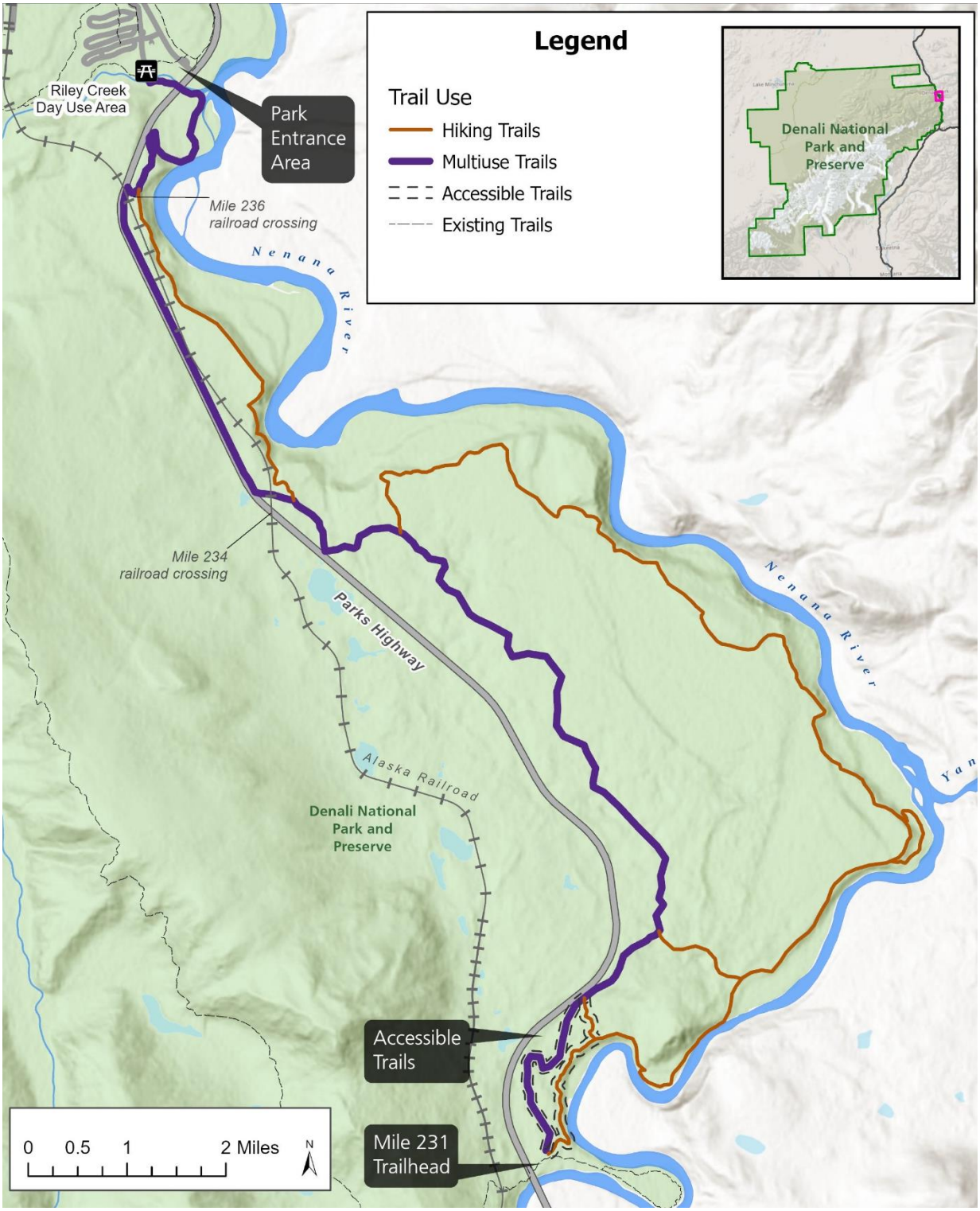
Construction of the trails would involve both hand crews and the use of mechanical equipment such as bulldozers, loaders, excavators, and material haulers. Borrow pits near the trail corridor would be used for aggregate when needed. Approximately one borrow pit would be needed for every mile of trail constructed, depending on the trail surface type and substrate material. Borrow pits would provide up to 50 to 100 cubic yards of material each, depending on the section of trail they are used for. Borrow pit locations would be restored to natural conditions when no longer needed for trail construction by filling them with organic material and vegetation mats generated by trail construction. When necessary, aggregate could be imported from sources outside of the project area.

Boardwalks would be used to cross wetland areas. On trails where only hiking is allowed, these boardwalks would be planks running between supports placed on top of the ground surface. For the multiuse trail, the boardwalk would be suspended above the wetland surface by helical piles driven into the ground. Helicopter use over one or two days could be required to transport boardwalk materials to difficult to reach sections of trail. This could be accomplished during low-visitation times of year and over non-wilderness areas of the park to minimize impacts from helicopter use.

Construction of a bridge over Riley Creek would require the use of heavy equipment. A total of two to three abutments would likely be needed to support the bridge. Construction access to the north abutment would be from the Riley Creek day use area along an existing maintained service road. Construction access to the south abutment would be along the multiuse trail alignment from the Parks Highway bridge over Riley Creek.

When possible, equipment staging and construction activity would be focused away from developed visitor areas. Sections of trail would be opened to visitor use as they are completed to minimize overlap of construction activity and visitor use of the trails.

Figure 1. Selected Alternative – Construct Multiuse and Hiking Trails



Construction of the selected alternative will be phased to provide time between project initiation and construction of the northern section of multiuse trail, allowing for more information to be provided by the Alaska Railroad Corporation about the possible railroad realignment while still ensuring that a multiuse trail, either in the DOT right of way or on the current railroad alignment, is built in the near future. Proposed phasing:

2023 Phase 1 = Hiking trail Parks Highway mile 231 to Nenana and Yanert rivers confluence
2024 Phase 2 = Hiking trail from Yanert River confluence to Parks Highway mile 234
2025 Phase 3 = Multiuse trail section (allowing only hikers to start with) from mile 234 to mile 231
2026 Phase 4 = Hiking trail from Parks Highway mile 234 to Riley Creek day use area
2027 Phase 5 = Multiuse trail from Parks Highway mile 234 to the park entrance area, either using the DOT right of way if the railroad realignment is not definitive, or on the current railroad location if the realignment is imminent. If the railroad realignment is planned but not imminent, construction of the multiuse trail could be delayed until the railroad realignment is completed.

Components of the Selected Alternative with Remaining Permitting Needs

Designs for two components of the selected alternative have yet to be finalized. The first is the section of multiuse trail between the two railroad crossings of the Parks Highway where the exact trail route depends on whether the railroad is realigned. The second is the multiuse bridge over Riley Creek. These components would be constructed in the final phases of the project in proposed construction phasing outlined in the EA and described above.

The EA describes likely outcomes for these components and analyzes the type and extent of impacts from them that can reasonably be expected. If final designs for this section of multiuse trail and the bridge would create a different type or extent of impact, additional NEPA compliance would be completed as appropriate.

The US Army Corps of Engineers, the US Environmental Protection Agency, the Alaska Department of Transportation and Public Facilities, and the Alaska Railroad Corporation would be involved in further compliance and permitting needs. The agencies are aware of the selected alternative and expect final designs prior to review and approval of needed pre-construction permits for these components of the selected alternative.

The table below summarizes the remaining permits and compliance that would be necessary before the northern section of the multiuse trail and the bridge over Riley Creek can be constructed.

Table 1. Summary of Remaining Permitting or Compliance

Selected Alternative Component	Remaining Permitting or Compliance Needs
Multiuse trail between mile 234 and 236 of the Parks Highway if constructed BEFORE railroad realignment adjacent to the highway	Permits from the Alaska Department of Transportation and Public Facilities (DOT) for any section of trail within the DOT right of way
	Permits from the Alaska Railroad Corporation (ARRC) for any section of trail within the ARRC easement and the trail crossing of the railroad
	Clean Water Act Section 404 permit from the US Army Corps of Engineers for any section of trail involving fill of wetlands
	Clean Water Act Section 401 permit from the US Environmental Protection Agency
Multiuse trail between mile 234 and 236 of the Parks Highway if constructed AFTER railroad realignment on the current railroad alignment	Cultural resource surveys of the current railroad alignment
	Additional NEPA compliance as appropriate
Bridge over Riley Creek	Clean Water Act Section 404 permit from the US Army Corps of Engineers for any section of trail involving fill of wetlands
	Clean Water Act Section 401 permit from the US Environmental Protection Agency
	Permits from the Alaska Department of Transportation and Public Facilities (DOT) for the trail section approaching the pedestrian bridge within the DOT right of way
	Additional NEPA compliance as appropriate

Rationale

The selected alternative best meets the purpose and need because it provides for a variety of visitor uses, increases universally accessible recreational opportunities in the park, and enhances multimodal connections to the park in a way that minimizes impacts to park resources. As such, the selected alternative fulfills longstanding management direction for the development of visitor opportunities in this frontcountry area of the park as originally outlined in the *1997 Frontcountry Development Concept Plan*.

Alternative 1 – No Action would have a lesser degree of resource impact than the selected alternative. However, because Alternative 1 would not involve the creation of any trails or recreational infrastructure in the project area, it does not enhance multimodal connections in the park, does not increase universally accessible opportunities in the park, and therefore does not adequately meet the project purpose and need to fulfill longstanding management direction to provide developed recreational opportunities in this area of the park.

Although Alternative 3 – Wait for the Railroad Realignment would also meet the purpose and need of the project, it makes the multiuse trail entirely contingent on the railroad realignment. This would leave open the possibility that construction of the multiuse trail may be delayed by many years or may never be constructed. Community members have indicated that a multiuse trail is a high priority, and the selected alternative better reflects this. Alternative 3 would also jeopardize the multimodal

connections to the park that is part of the purpose and need for the project, informed by the *2018 Long Range Transportation Plan*.

Alternative 4 – Trails and Campgrounds meets the purpose and need of the project, but would have a greater overall impact on park resources than the selected alternative. Wildlife in particular would be impacted to a greater degree under Alternative 4 than under the selected alternative due to the increased concentration of human use in the campgrounds and the increased potential for human-wildlife interactions and wildlife habituation to food. Additionally, public comments reflected concern about the impacts to wildlife and park operations from implementation of Alternative 4.

The selected alternative therefore best meets the purpose and need of the project, minimizes impacts to park resources, and reflects community support regarding recreational infrastructure development in the Nenana River corridor of the park.

3. Mitigation Measures

The NPS places strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. Therefore, the NPS will implement multiple mitigation measures and best management practices to protect natural and cultural resources as well as the visitor experience. These measures and practices are described in detail in the EA and are incorporated by reference. As stated in the EA, these mitigation measures and best management practices are included as integral parts of the selected alternative. Mitigation measures were not needed to reduce impacts below the level of significance but do reduce impacts on resources, as described in Chapters 5 and 6 of the EA. These mitigation measures and best management practices are summarized in the table below.

The NPS has the authority to implement these mitigation measures under the Organic Act, the National Historic Preservation Act, the *2006 NPS Management Policies*, park-specific regulations, and other applicable federal and state requirements.

Table 2. Mitigations Incorporated into the Selected Alternative

Resource	Mitigations
Wildlife	Trail construction and debris deposition avoided on the steep, sandy bluffs that provide important insect and pollinator habitat
	Vegetation cut only during times of year least likely to impact nesting birds, per guidelines established under the Migratory Bird Treaty Act
	Trails routed to avoid food-dense areas (e.g., soapberry patches)
	Trails established with adequate sightlines to reduce the possibility for human-wildlife encounters, especially with regard to bicycles on the multiuse trail
Vegetation and Wetlands	When possible, vegetation cut in the fall in preparation for the next year's construction to avoid attracting spruce bark beetles
	Trails routed to minimize the need for vegetation removal and wetlands impacts
	Wetlands addressed with boardwalks rather than fill whenever possible
	Tundra mats saved for revegetation of borrow pits and other disturbed areas whenever possible
	When not hauled off-site for disposal, cut vegetation scattered to encourage decomposition and minimize impacts to vegetation that would be covered by piles of removed vegetation

Resource	Mitigations
	Areas disturbed adjacent to trail revegetated using native plant seed mix in year of disturbance
Cultural Resources	Trails routed and infrastructure placed to avoid cultural resource sites
	Archeology monitor on site during project implementation
	Any route changes or borrow pits surveyed for cultural resources prior to trail construction and any discovered cultural resources would be avoided
	If cultural resources or items protected by the Native American Graves Protection and Repatriation Act were discovered during project implementation, all project-related activities in the vicinity of the discovery would be stopped and the park archeologist would be notified immediately. The NPS in consultation with the State Historic Preservation Officer and other consulting parties would determine a course of action.
Visitor Use and Experience	When possible, mechanical equipment or helicopter use concentrated in low-visitation times of year
	Helicopters routed away from wilderness areas or high-visitation areas
	Equipment and construction activity staged away from visitor areas whenever possible
	Signage at trailheads designed to incorporate messaging about safe behavior around wildlife
Soundscapes	When possible, mechanical equipment or helicopter use concentrated in low-visitation times of year
	Helicopters routed away from wilderness areas or high-visitation areas
	Use of noise-reducing backup alarms on motorized equipment whenever possible

4. Significance Criteria Review

Potentially Affected Environment

The project area is the portion of Denali National Park east of the Parks Highway and west of the Nenana River. It is bounded on the north by the existing Riley Creek Day Use Area at the park entrance and the southern terminus is the NPS trailhead serving the Triple Lakes and Oxbow trails near mile 231 of the Parks highway. This non-wilderness area of the park is considered part of the park frontcountry and encompasses approximately 2,840 acres.

Resources within the potentially affected environment that may be beneficially or adversely impacted by the selected alternative include wildlife, vegetation and wetlands, and cultural resources as well as recreation resources and the visitor experience.

Degree of Effects of the Action

The NPS considered the following actual or potential project effects in evaluating the degree of effects for the selected alternative.

Beneficial and Adverse, Short-term and Long-term Effects of the Selected Alternative

No significant impacts to resources were identified that would require analysis in an Environmental Impact Statement. Whether taken individually or as a whole, the impacts of the selected alternative, including direct, indirect, and cumulative effects, do not reach the level of a significant effect

because most adverse impacts associated with implementation would be minimal or spatially confined. Best management practices and mitigation measures identified above would further minimize any potential adverse impacts.

Wildlife

As described in Chapter 6 of the EA, the introduction of visitor use and trails to the project area will increase the potential for human-wildlife interactions. These interactions will have different effects on different species but should they occur, will generally lead to increased physiological stress on individual animals, displacement of individual animals from the area, and an increased potential for unsafe human-wildlife interactions. Additionally, wildlife in the project area may be exposed to human food or other litter, causing changes to movement patterns and possible health effects to individual animals. These long-term, adverse impacts to wildlife from human-wildlife interactions will be confined to the individual animals involved in the interactions, and will not have wider effects on wildlife populations beyond the project area due to the relative abundance of wildlife and wildlife habitat in the surrounding area.

In addition to the increased possibility for human-wildlife interactions, the presence of trails may affect the way wildlife of all kinds move through and use the area. For smaller animal species which do not range over large areas the construction of trails could represent a decrease in the overall amount of available habitat in the immediate vicinity of the trails. Wildlife may also be attracted to the trails as a path of least resistance or may avoid using or crossing them. In general, the trails developed under the selected alternative will fragment the amount of habitat in the area available to animals and may prevent some animals from accessing the Nenana River or other important habitat areas. These long-term, adverse effects to wildlife habitat and movement will be limited to individual animals and the project area due to the relative abundance of similar habitats in the surrounding region with a lesser degree of human influence.

With the inclusion of the best management practices and mitigation measures outlined above and in the EA, there will be no significant adverse impacts to the wildlife resources of Denali National Park under the selected alternative.

Vegetation and Wetlands

Development of trails in the selected alternative will remove approximately 11 acres of vegetation and will fill or disturb 0.6 acres of wetlands. This long-term, adverse impact to less than 12 acres of vegetation and wetlands is small in the context of the 2,850 acres of the project area with similar vegetation and wetland communities and in the wider context of the six million acres of Denali National Park.

Similarly, there will be the potential for a long-term, adverse impact to vegetation composition immediately adjacent to the trails as species adapted to disturbance and open canopies potentially dominate the vegetation communities currently present. In areas of late-successional, closed-canopy species, that current community could be replaced by early-successional, open-canopy species better

adapted to disturbance. If these impacts materialize, they will be long-term but very localized to the immediate margins of the trails described in the selected alternative.

The selected alternative could also facilitate the spread of invasive species along trail corridors. Although invasive plant species are a known problem along the Parks Highway, the existing Oxbow and Triple Lakes trails near the project area that also depart directly from the Parks Highway do not have substantial issues with invasive species. Although the potential exists for a long-term, adverse impact due to further spread of invasive plant species, the likelihood of a problem developing is relatively low.

With the inclusion of the best management practices and mitigation measures outlined in section three of this document and in the EA, there will be no significant adverse impacts to the vegetation and wetland resources of Denali National Park under the selected alternative.

Cultural Resources

Development of hiking and multiuse trails in the Nenana River corridor will increase the presence of humans in the area and will increase the potential for disturbance of known or previously undocumented cultural resource sites. Despite the potential for this long-term, adverse impact to cultural resources, a number of mitigation measures incorporated into the selected alternative would reduce this potential to low levels. These mitigation measures include construction of the trails and associated infrastructure in such a way to avoid cultural resources completely, survey of any minor reroutes prior to construction, and periodic monitoring of ground disturbance during construction. Mitigation measure such as these will limit direct impacts to cultural resources from construction, and will locate human activity in the area away from cultural resources, thus reducing the potential for cultural resource disturbance to very low levels under the selected alternative.

Recreation Resources and Visitor Experience

Creating developed recreational opportunities in the Nenana River corridor will introduce infrastructure and visitor use to an area of the park that largely has neither, increasing the amount of bicycle and pedestrian activity in the area and providing additional recreational opportunities in the frontcountry of Denali National Park. The additional recreational opportunities provided include hiking trails, multiuse trails open to bicycles and pedestrians, and two miles of trail constructed for universal accessibility. These recreational opportunities will be a new long-term addition to this specific area of the park, but are of a type consistent with the recreational opportunities otherwise available in the rest of the park frontcountry.

The selected alternative will also increase the total amount of developed trails available to visitors to 57 miles from the current 40 miles and will decrease the approximately six million acres of trail-less park land by 2,850 acres, representing less than 0.05% of the park's total acreage. This long-term increase in the extent of trails available to visitors reflects a change to recreation resources in the park consistent with the *1997 Frontcountry Development Concept Plan* and *2006 Backcountry Management Plan* and does not significantly adversely affect other opportunities for off-trail recreation in Denali National Park.

The eight miles of multiuse trail in the selected alternative will facilitate multimodal connections between the park entrance area and residential and commercial areas to the south of the park entrance. The multiuse trail will also provide pedestrians and bicyclists a safer and more scenic alternative to the Parks Highway shoulder for transportation between the park entrance and areas to the south. This increase in safer multimodal connections to the park represents a long-term beneficial impact to the visitor experience.

Mitigations described in section three of this document and in the EA will decrease adverse impacts to the visitor experience during trail construction. The impacts described above, in concert with the mitigations incorporated into the selected alternative, do not include significant adverse impacts to recreation resources and the visitor experience in Denali National Park.

Degree to Which the Selected Alternative Affects Public Health and Safety

In general, the selected alternative will have minor effects on public health and safety. The introduction of trails and visitor use to the project area will increase the likelihood of human-wildlife interactions in this area of the park. It is possible that some of these interactions may be unsafe. Some level of risk is inherent in any outdoor recreation in wildlife habitat. The degree of this risk under the selected alternative is comparable to the degree posed by similar recreational activities undertaken in other areas of Denali National Park where hiking and biking are already allowed. To minimize the possibility of unsafe interactions, the selected alternative includes trail design features allowing for long sightlines, discouragement of excessive speeds, and visitor education at trailheads. These measures will reduce the public safety risks inherent in outdoor recreation in a natural setting.

Additionally, the multiuse trail will provide pedestrians and bicyclists a safer alternative to the Parks Highway shoulder for transportation between the park entrance and areas to the south. This will increase safety for park visitors as well as for all users of the Parks Highway. This increase in safer multimodal connections to the park represents a long-term beneficial impact to public safety.

Overall, the adverse impacts to public safety inherent in outdoor recreation will be reduced by mitigation measures intended to minimize the potential for human-wildlife interaction. A safer pedestrian and bicycle pathway in the Parks Highway corridor will increase safety in the area for all users, providing a long-term beneficial impact to public safety.

Effects That Would Violate Federal, State, Tribal, or Local Law Protecting the Environment

The selected alternative does not threaten or violate applicable federal, state, or local environmental laws or requirements imposed for the protection of the environment. A detailed discussion of the impacts to the environment resulting from the selected alternative is included in Chapter 6 of the EA.

The NPS consulted with the Alaska State Historic Preservation Office (SHPO) under the National Historic Preservation Act for the selected alternative. On February 17, 2023, the SHPO concurred with the finding of no adverse effect to historic properties by the selected alternative.

Tribal consultation was initiated in January 2023, in addition to informal discussions with tribes during broad scope planning for the project area in 2021. Ahtna expressed interest in the project, but did not provide feedback specific to the alternatives or analysis in the EA. The NPS is continuing to consult with Ahtna and the Native Village of Cantwell regarding the name of the trailhead at the southern end of the project area and the potential name for one or more of the trails constructed under the selected alternative.

In accordance with Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act of 1980, the NPS completed a Section 810 analysis to evaluate potential restrictions to subsistence activities resulting from the selected alternative. The analysis is included as Appendix A of the EA. The NPS concluded that the selected alternative will not result in a significant restriction of subsistence uses.

As described in section two of this document, two components of the selected alternative will require additional agency consultation prior to implementation after final design, including construction of the section of multiuse trail between mile 234 and 236 of the Parks Highway and installation of the multiuse bridge crossing Riley Creek. The NPS will consult with the US Army Corps of Engineers and the US Environmental Protection Agency on Sections 404 and 401 of the Clean Water Act to obtain necessary permits following final designs. Additional National Environmental Policy Act compliance as necessitated by the final designs will also be completed prior to implementation of these components of the selected alternative.

5. Finding of No Significant Impact

As described above, the selected alternative does not constitute a major federal action having a significant impact on the human environment. Based on the foregoing, an environmental impact statement is not required for this project and, thus, will not be prepared.

This finding is based on consideration of the Council on Environmental Quality criteria for significance (40 CFR 1501.3 (b)) regarding the potentially affected environment and degrees of effects of the impacts described in the EA.

Appendix A:
Response to Public Comments

The NPS received 23 pieces of correspondence regarding the EA during the March 1-30, 2023, public comment period. Comments received did not warrant any modifications to the alternatives, issues, or analysis in the EA. Therefore, an errata is not included to inform a final decision. However, some commenters raised concerns, questions, or other issues regarding the EA. These comments and concerns are addressed below.

Concern Statement: The campgrounds that would be developed under Alternative 4 would provide an additional visitor opportunity. Constructing them concurrently with the trails would lessen the impact on park resources and visitors. Add a sentence about campgrounds as an economic opportunity outside of the park.

NPS Response: The NPS recognizes that the campgrounds described in Alternative 4 would provide an additional visitor opportunity in the Nenana River corridor consistent with the *1997 Frontcountry Development Concept Plan*, however, these campgrounds would also create greater impacts to park resources than the selected alternative.

In addition to the greater amount of vegetation removal required for campground construction, wildlife would have a greater likelihood of being affected by an increased concentration of human and would have a greater likelihood of becoming habituated to human food. The NPS also may not be able to adequately address the operational needs presented by the campgrounds, including managing a reservation system, routine maintenance, and the increased need for NPS presence required at campgrounds. Although constructing the campgrounds concurrently with the trails might reduce some of the impacts to visitor experience, the overall impacts to vegetation and wildlife would remain the same, regardless of when campground construction took place.

Campground development is also a possible economic opportunity for entities outside of the NPS, and an existing campground south of the project area currently serves those wishing to camp.

For these reasons, it was determined that the selected alternative rather than Alternative 4 best met the project need to provide visitor opportunities in this area of the park while minimizing impacts to park resources, and no campgrounds will be constructed under the selected alternative.

Concern Statement: Trail development in this area will increase vehicle traffic and potential highway safety problems.

NPS Response: An increase in vehicle activity at the trail access points at the Riley Creek Day Use Area and at the trailhead near mile 231 of the Parks Highway is a likely outcome of the selected alternative. Impacts to traffic and safety are not anticipated, however, given existing infrastructure meant to address parking and trail access needs. The Riley Creek Day Use Area has ample parking, which to date rarely exceeds capacity. If additional parking is needed, there are other areas for parking throughout the park entrance area, and an existing free shuttle can easily transport hikers from parking areas to the Riley Creek Day Use Area parking lot.

Similarly, the trailhead near mile 231 of the Parks Highway provides safe, off-highway parking for access at the southern end of the trail system. The impetus for the mile 231 trailhead project was to address highway safety issues by moving trail parking off of the highway shoulder and providing adequate turning lanes into the trailhead. Trail connectors will allow users to access the trails from the trailhead and parking area without needing to cross lanes of traffic. The new trailhead facility, trail connections, and the 2022 Alaska DOT improvements to the highway in the area provide ample safe parking and adequately address highway safety in the area.

Concern Statement: There will be a high degree of pet use on these trails, leading to increased wildlife impacts.

NPS Response: As with any trail in national park units, it is possible that trail users will disobey park rules and will take pets on the trails constructed under the selected alternative. Similar to other trails where this is a possibility, the NPS will mitigate risks by providing signage indicating park rules regarding pets and will educate visitors during any patrols or visitor encounters. In addition to these measures, the trailhead at mile 231 of the Parks Highway will include specific pet-related signage and waste disposal facilities to encourage trailhead users to keep their pets within the developed parking area. While these measures are unlikely to eliminate all unlawful pet use on trails, they should reduce pet use overall.

Concern Statement: The multiuse trail should be open to e-bikes as well as traditional bicycles.

NPS Response: On November 2, 2020, the NPS issued a final regulation regarding electric bicycle (e-bike) use and stipulating that superintendents have the authority to allow or deny e-bike use in areas where traditional bicycles are allowed. The NPS reconsidered the use of e-bikes in Denali under these new regulations in September 2021, and decided to reaffirm and reauthorize the use of e-bikes in areas of the park designated under the Superintendent's authority in 36 CFR 4.30(i).

Since e-bikes were initially authorized in Denali in March 2020, the NPS has not observed increases in safety incidents or increased wildlife or other resource impacts related to e-bike use. The 2021

reauthorization of e-bike use in Denali was based on a determination that in these areas of the park where traditional bicycles and hiking are already allowed under 36 CFR 4.30 and 36 CFR 13.914, e-bike use was unlikely to create further impacts to wildlife or other park resources (Marion & Wimpey, 2017). Additionally, because e-bike users tend to exhibit similar safety behavior as traditional bicycle users (Langford, Chen, & Cherry, 2015) and state regulations regarding safe operation apply equally to traditional bikes and e-bikes, increases in user conflicts or unsafe incidents are not expected. Finally, authorization of e-bikes in areas where traditional bicycles are allowed provides additional healthy (Bourne et al., 2018) opportunities for visitors to experience Denali, particularly visitors with physical limitations that may otherwise preclude them from a human-powered park experience (MacArthur, Dill, & Person, 2014; MacArthur, Harpool, Scheppke, & Cherry, 2018).

For the reasons outlined above, it is expected that when constructed, the multiuse trail described in the selected alternative will be open to e-bikes as well as traditional bicycles and such use will be noted in the Superintendent's Compendium. Other regulations regarding e-bike use in 36 CFR 1.4 and 36 CFR 4.30 as well as restrictions and guidance on e-bike use issued by the Superintendent under 36 CFR 13.50 will remain in effect and unchanged.

Concern Statement: Fee collection from users of these trails will be challenging. The NPS should not collect fees in this area in order to provide greater access to the park.

NPS Response: Similar to the rest of the park entrance area and the Park Road corridor up to mile 15, it is possible that visitors may use these trails without realizing that they need to pay a park entrance fee. The EA outlines several possible methods the NPS could employ to collect these fees including signage with QR codes accessing digital means of fee payment at trailheads, remote fee collection stations, or ranger roves with tablets for fee collection. Whether these or other methods are feasible and implemented will depend to some extent on how visitation patterns evolve. It is possible that fee collection for users of the trails developed under the selected alternative will prove operationally infeasible. The NPS will likely try several different methods before determining whether it is operationally possible to collect fees from users in this area and how best to accomplish that goal.

Users of the trails constructed under the selected alternative will recreation on NPS land. Recreational fees should be paid by all visitors, regardless of the activities they participate in on park land. Recreation fees are used to support external communication, maintain trails and other park facilities, and to pay for park staff who will patrol the trails constructed in the selected alternative. The NPS will explore options for fee collection for the trails in the selected alternative and will determine which if any methods are feasible in this area.

Concern Statement: The multiuse trail should be wider and paved to make the trail safer and more accessible.

NPS Response: While the NPS recognizes that design guidelines for shared-use paths call for a 10-foot width, use on the multiuse trail is expected to be low relative to more urban and populated areas, even on peak days or during peak visitation hours. Sight distance along the trail will be maximized to the extent feasible for wildlife safety, which will also minimize surprise encounters between users on the trail. Sections of the multiuse trail where the terrain steeply slopes away from the edge of the trail will have shoulders to further increase the margin of safety. In addition to providing a safe and pleasant visitor experience, the eight-foot width of the multiuse trail in the selected alternative will also reduce impacts to park resources as compared to a wider trail.

Surfacing the trail with compacted gravel is cost effective, fits within the current maintenance program, minimizes the environmental impact of the project, and is an important means of reducing the speed of bicycle traffic to reduce the chance of negative wildlife encounters. Utilitarian bikers who wish to travel at high speed and forego the trail experience through the park will still have access to the paved shoulders of the Parks Highway. These highway shoulders are eight feet wide and are constructed to highway safety standards to allow for such use.

All of Denali's existing frontcountry trails designed to meet accessibility guidelines are surfaced with compacted gravel, and this surface is firm and stable under most conditions. The NPS has been able to maintain these existing trails to fully accessible standards, and expects to be able to do so on the trails constructed under the selected alternative as well.

Concern Statement: It is unclear how large or guided groups will be managed on these trails.

NPS Response: The NPS does not regulate group size for private parties recreating in frontcountry areas of Denali National Park.

The EA states that commercial use in the Nenana River corridor will be managed under existing laws, NPS policies, and park planning documents. As of spring 2023, existing guidance limits commercially guided groups on frontcountry trails to a party size of 12. This limit currently applies to commercially guided groups hiking on Denali's other frontcountry trails and will also apply to any commercial groups using the trails developed under the selected alternative.

Concern Statement: The construction of the LNG pipeline through this area of the park may affect trail location and access.

NPS Response: Although the NPS has issued a permit for the operation of an LNG pipeline through the Nenana River corridor in Denali National Park, no application for pipeline construction has been received by the NPS and final pipeline route selection, engineering, and design are not yet started as of spring 2023. It is possible that the pipeline will never be constructed. Given this uncertainty, the

proposed but unfinalized route of the pipeline through the area did not substantially influence trail alignments in the selected alternative. As of spring 2023, the NPS does not intend to alter the location of the trails in the selected alternative if the pipeline is eventually constructed.

If the pipeline were constructed, it is possible that temporary restrictions to trail access may be necessary to protect visitor safety during pipeline construction. After the construction phase, the terms and conditions of the NPS-issued permit for pipeline operation protect public access to the area and use of any trails in the area of the pipeline:

> "11. Not withstanding the issuance of this permit, the NPS (a) may establish trails, roads, or other improvement across, over, on, or through the Permitted Area for use by the NPS, by Park visitors, or by others […]
>
> 12. The Permittee shall not allow its activities in the Permitted Area to interfere with the public's use and enjoyment of public access to the Permitted Area. The Permittee shall not restrict public use or access to the Permitted Area except as minimally necessary to ensure public safety and as approved by the Superintendent in writing, and such restriction is subject to review, revision, or revocation at the discretion of the NPS."

Concern Statement: More information is needed about the wildlife in this area and how they will be affected by these trails.

NPS Response: The *2006 NPS Management Policies* require that NPS decision-makers use "the best available scientific and technical information" when determining management actions. In the Nenana River Trails EA, the best available information regarding wildlife and potential impacts to wildlife included studies in the area of avian and insect species and the professional judgement of NPS biologists with combined decades of experience studying wildlife in Denali.

Although studies specific to the project area have not been conducted for all species present, such studies, though helpful, are not necessary to sufficiently characterize likely impacts to wildlife and to determine whether those impacts are significant. An interdisciplinary group of NPS wildlife biologists assessed the selected alternative and other alternatives analyzed in the EA and determined that the most salient wildlife impacts were an increase in human-wildlife interactions, the fragmentation of wildlife habitat, and alterations to wildlife movement patterns. This assessment was grounded in expert judgement and best available information concerning wildlife in the project area, and was based on professional experience working with wildlife in Denali in habitats similar to the project area and in areas with trail development and use similar to that in the selected alternative.

Concern Statement: The NPS should have conducted tribal consultation.

NPS Response: The NPS did conduct tribal consultation during the years of pre-planning for this project and during development of the EA. Consultation specific to the EA was initiated on

November 2, 2022. Notification letters were sent via mail and email to the below Federally Recognized Tribes, ANCSA Regional and Village Corporations, and Tribal Consortiums. Ahtna Inc. was the only entity to respond and they indicated they would like to consult on the project. National Historic Preservation Act (NHPA), Assessment of Effect finding letters (including invitations to consult on the NHPA process) were sent via email to all of the below entities (unless otherwise noted) as well on January 17, 2023. The NPS is continuing to consult with Ahtna and the Native Village of Cantwell regarding the name of the trailhead at the southern end of the project area and the potential name for one or more of the trails constructed under the selected alternative.

Federally Recognized Tribes:
Native Village of Cantwell
Manley Hot Springs Village
Nenana Native Association
Nikolai Village
Native Village of Tanana
Telida Village

ANCSA Village Corporations:
Seth-De-Ya-Ah Corporation (no email)
Tozitna, Limited
Toghotthele Corporation (no email)
BEAN RIDGE Corporation
MTNT, Limited

ANCSA Regional Corporations:
Ahtna, Inc.
Doyon Limited
CIRI Corporation

Tribal Consortiums:
Tanana Chiefs Conference

Concern Statement: Conditions have changed since recreational development was first proposed in the *1997 Frontcountry Development Concept Plan*, and it is unreasonable to pull forward ideas from an outdated plan.

NPS Response: In the years since the idea for trails in the project area were first outlined in the *1997 Frontcountry Development Concept Plan*, the NPS has continued to plan for additional frontcountry recreational opportunities. This ongoing desire for additional visitor opportunities in the frontcountry is underscored by capacity and access challenges that the Park Road has experienced since 1997. Although some of the ideas explored in the EA were first described in the *1997 Frontcountry Development Concept Plan*, the alternatives analyzed in the EA were designed to address current conditions and reflect evolution in the ideas first presented in 1997. The alternatives in the EA were informed most directly not by the *1997 Frontcountry Development Concept Plan*, but by public feedback received during 2014-2016 trails planning and during public engagement in 2021 about trail development. The *1997 Frontcountry Development Concept Plan* may have first articulated the idea for trails in the project area, but the EA was informed most directly by the continued NPS intent of developing trails in the Nenana River corridor and by multiple, recent rounds of public engagement on the subject.

Concern Statement: The safety concerns of human-wildlife interactions are not adequately addressed in the EA.

NPS Response: The EA identifies an increase in human-wildlife interactions as one of the key issues for analysis, and this is acknowledged and analyzed for each action alternative. The EA is clear that bicycle use in particular presents increased risk to the humans and animals involved in those interactions. While the EA posits that trail design features will help mitigate these risks, it does not attempt to assert that the safety risk of recreating in wildlife habitat will be eliminated. There is risk inherent in any outdoor recreation in Denali National Park, and there will be risk associated with the recreational opportunities presented by the trails in the selected alternative.

The nature of the trails in the selected alternative and the types of activities those trails will support are similar to existing trails and uses in similar habitat elsewhere in the park. This suggests that the degree of risk under the selected alternative is comparable to the degree posed by similar recreational activities undertaken in other areas of Denali National Park where hiking and biking are already allowed. For these reasons, the development of facilities analyzed in the EA would pose no more safety risk than other similar facilities in the park, and safety was dismissed from further analysis.

Concern Statement: The proposed trails do not fully meet the requirements of the Architectural Barriers Act (ABA) for universal accessibility.

NPS Response: The NPS acknowledges that the slopes along much of the trail routes are conducive to constructing an accessible hiking trail, however, the underlying soils are not expected to be able to support a uniformly and consistently firm and stable tread surface as required by the ABA. Gravel accumulated from excavations along the trail will be used to fill in sections of trail with substandard soils. This material borrowed on site is expected to be sufficient to create a durable tread appropriate for a backcountry trail, but will not be available in the quantity or quality needed to create an accessible tread, as required by the ABA.

Additionally, approximately 2.5 miles of the hiker-only trail will be built across steep terrain where mechanized construction is not possible and constructing an accessible trail by hand is not feasible. An additional 4.5 miles of the hiking trail will require importing tread material. Moving the required volume of material needed to meet ABA standards would require the extensive use of a helicopter, which is not feasible for this project or a prevailing construction practice.

Accessibility guidelines from the US Access Board allow for an entire trail to be exempted if more than 15% of the trail cannot meet the standards, as it the case with the hiker-only trail. The multiuse trail is designed to comply to the fullest extent possible with accessibility guidelines and will provide an alternative for users that require a higher level of accessibility.

The section of hiker-only trail at the southern end of the project specifically designed to meet ABA standards is wider than the 36 inches accessibility standards require. In addition to use from visitors with accessibility needs, this section of trail is anticipated to see a high volume of out and back

hikers, including families and guided groups. A tread width of five feet allows for comfortable passing and minimizes the trampling of adjacent vegetation from people stepping aside to allow others to pass or to walk side by side. Because the adjacent terrain doesn't restrict hikers to the constructed tread, the NPS expects that without a wider trail, hikers would trample vegetation, damage the designed tread, and make maintaining the tread to accessible standards challenging. A five foot trail width through similar terrain in Denali's frontcountry has proven durable and maintainable over time, without the need for a paved surface.

Concern Statement: The EA does not adequately address the impacts from the borrow pits needed for trail construction.

NPS Response: Impacts from the borrow pits were included in the analysis of impacts to vegetation and wetlands as well as cultural resources. The total amount of vegetation removal in the EA includes the borrow pits that will be necessary for trail construction. Borrow pits will involve removal of vegetation and underlying soils. Borrow pit locations will be restored to natural conditions when no longer needed for trail construction by filling them with organic material, soil, and vegetation mats generated by trail construction. Borrow pits will be located outside of areas known to contain cultural resources and wetlands, and cultural resources staff will monitor borrow pit creation to ensure cultural resources are not disturbed. When necessary, aggregate will be imported from sources outside of the Nenana River corridor, further reducing impacts to park resources and the need for borrow pit creation inside the Nenana River corridor.

Appendix B:
Non-Impairment Determination

The NPS Organic Act of 1916 directs the NPS to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (54 USC 100101). The *2006 NPS Management Policies*, Section 1.4.4 explains the prohibition on impairment of park resources and values:

> *While congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.*

An action constitutes impairment when its impacts "harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values" (NPS, 2006a, Section 1.4.5). To determine impairment, the NPS must evaluate the "particular resources and values that will be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. An impact on any park resource or value may constitute impairment, but and impact would be more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance (NPS, 2006a, Section 1.4.5).

Resources that were carried forward for detailed analysis in the EA, and for which a non-impairment determination has been made, include wildlife, vegetation and wetlands, and cultural resources. A non-impairment determination is not necessary for recreation resources and visitor experience

because this impact topic is not generally considered a park resource or value subject to the non-impairment standard (NPS, 2006a, Section 1.4.6).

Wildlife

The preservation of wildlife populations is a founding purpose of Denali National Park and Preserve, and wildlife is one of the fundamental resources of the park (NPS, 2014). The Nenana River corridor provides habitat for a wide variety of species common in boreal forest ecosystems.

Construction of trails in the Nenana River corridor under the selected alternative would increase the potential for human-wildlife interactions and fragment wildlife habitat, affecting wildlife movements in the area. The area where these impacts will occur is 2,850 acres bounded on the west by an interstate highway. This represents a small fraction of the available wildlife habitat across the six million acres of Denali National Park and the many thousands of additional undeveloped acres outside of the park to the east of the project area.

Although the selected alternative will impact wildlife in the project area, the abundance of wildlife populations and availability of similar habitats in the area indicate that any effects on wildlife from the selected alternative will be localized and that wider wildlife populations will be unaffected. Mitigations and best management practices incorporated into the selected alternative will further reduce the impacts to wildlife. Wildlife will continue to be able to use the project area as well as the surrounding areas that provide similar habitat. For these reasons, wildlife populations will continue to be sustained in Denali National Park for the enjoyment of current and future generations and the NPS has determined that the selected alternative will not result in impairment of wildlife.

Vegetation and Wetlands

The boreal forest present in the project area is common in the region, however, the glacial history and complex topographic setting of the Nenana River corridor is somewhat unusual. A mixture of flat benches, small esker ridges, and relict kettle ponds allow for a diversity of vegetation types at a scale such that traversing the area can bring one into contact with, for example, dense spruce forest, dry aspen groves, grassy meadows, and riparian willows, all within a relatively short period of time. This arrangement of vegetation is somewhat uncommon along the Park Road corridor and other areas of the park frequented by visitors.

The selected alternative will remove approximately 11 acres of vegetation and will disturb 0.6 acres of wetlands. Additionally, the construction and use of trails in the area may lead to vegetation composition change along the margins of trails and may increase the possibility of invasive species spread. This total amount of vegetation and wetlands disturbance is small relative to the 2,850 acres of the project and the six million acres of Denali National Park. Although the disturbed acres will be impacted, one result of doing so is that visitors will be exposed to and be able to enjoy the diverse vegetation and wetland communities that the trails will traverse, a diversity that is otherwise difficult for most visitors to experience in one park visit.

The potential for vegetation composition change along the margins of the trails will be extremely localized to the strips of vegetation immediately adjacent to the trails. This impact is therefore spatially limited. Similarly, although the potential exists for invasive species spread along the trails, the existence and use of trails in the immediate vicinity of the project area suggests that impacts greater than minor increases in invasive plant species spread are unlikely to materialize. Mitigations incorporated into the selected alternative will further reduce the likelihood and magnitude of impacts to vegetation and wetlands. For these reasons, the NPS has determined the selected alternative will not result in impairment of vegetation and wetland resources.

Cultural Resources

There is a long history of human occupation of the Nenana River corridor, evidenced by the 18 recorded cultural resource sites in the project area. Preservation of historic or archeological sites is one of the reasons Denali National Park was founded, and cultural resources are identified as an important park resource (NPS, 2014).

Development of hiking and multiuse trails in the Nenana River corridor under the selected alternative will increase the presence of humans in the area and will increase the potential for disturbance of known or previously undocumented cultural resource sites. The selected alternative incorporates a number of mitigations to reduce this potential for disturbance to a low level, similar to the potential for cultural resource disturbance from use of other trails in the Denali frontcountry.

Construction of the trails, borrow pits, and associated infrastructure will be completed in such a way to avoid cultural resources and so should minimally impact these resources. Proposed trail alignments that would impact any cultural resource sites will be rerouted to avoid disturbing the sites. Reroutes will be surveyed prior to trail construction and any cultural resources avoided through additional small realignments. Given the rich cultural history of the area and the presence of historic era sites within the project area, periodic monitoring of ground disturbance will be conducted during construction under the selected alternative, especially in sections of the proposed trails where cultural sites have been located or in areas that have high potential for buried cultural remains.

Although the potential for disturbance to cultural resources exists under the selected alternative, it is no greater than the potential presented by use of any other area of the park, given that cultural resources are found throughout the park landscape. Mitigations and best management practices further reduce the possibility for cultural resource disturbance from trail construction and use. For these reasons, the NPS has determined that the selected alternative will not result in impairment of cultural resources.

Summary

The NPS has determined that implementation of the selected alternative will not constitute impairment of the resources of the park. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts described in the EA, comments provided by the public and others, and the professional judgement of the decision maker guided by the direction in the *2006 NPS Management Policies*.

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