

National Park Service
U.S. Department of the Interior

Kenai Fjords National Park
Alaska



Finding of No Significant Impact

Herman Leirer Road Multi-Modal Trail Feasibility Study
Environmental Assessment

July 2013

Recommended:



Superintendent, Kenai Fjords National Park

7/30/2013

Date

Approved:



Regional Director, Alaska

8/2/13

Date

FINDING OF NO SIGNIFICANT IMPACT

Herman Leirer Road Multi-Modal Trail Feasibility Study Environmental Assessment Kenai Fjords National Park, Alaska July 2013

The National Park Service (NPS) prepared an environmental assessment (EA) to evaluate a proposal to determine the feasibility of creating a multi-use trail (bicycle, pedestrian and ski) along the Herman Leirer Road, starting from the Seward Highway and ending at the Exit Glacier Nature Center in Kenai Fjords National Park. The approximately 8.2 mile trail will pass through public lands and right-of-ways managed by the State of Alaska, Chugach National Forest, and Kenai Fjords National Park in Seward, Alaska. The environmental assessment was created to serve as a common vision for state, federal, and local agencies as well as organizations to pursue funding for such a project by any number of sources; there is currently not a funded project to construct the trail.

The National Park Service has selected Alternative *B, the Meandering Separated Trail*, which identified that a non-motorized trail will be designed and constructed for use by pedestrians, mountain bikes (bicycles), skiers and mushers. The trail will be mostly separated from the Herman Leirer Road, as a soft surface of recycled asphalt or aggregate. The trail will be 10 feet wide and transition to 12 feet wide at MP 7.3 in Kenai Fjords National Park. Between MP 1.3 and MP 6.4, the soft surface pathway will meander farther from the road and follow existing trails where feasible (trails in ADNR lands will need to go through a regulatory process and easement permitting to be designated as non-motorized). From MP 7.3, the trail will be separated from the existing roadway by a 10 foot (minimum) vegetated buffer. There will be new trail bridges over minor drainages for the trail separated from the roadway.

Six public comments were received and all supported the project. The State of Alaska comment provided support as long as the trails in ADNR lands went through a regulatory process and easement permitting to be designated as non-motorized.

ALTERNATIVES

Four alternatives were evaluated in the EA.

Alternative A, No Action (Environmentally Preferable Alternative)

This is the current and on-going configuration of Herman Leirer Road. No designated trail exists and non-motorized travelers use the paved road or road edge for bicycling, skiing, mushing, and pedestrian travel.

Alternative B, Meandering Separated Trail (the Preferred Alternative, Selected Alternative)

A non-motorized trail will be designed and constructed for use by pedestrians, mountain bikes (bicycles), skiers and mushers. The trail will not be designed for road bicycles; they will

continue to use the paved Herman Leirer Road. The trail will be mostly separated from the Herman Leirer Road, as a soft surface of recycled asphalt or aggregate (which could be paved later with no increase in project footprint), will be 10 feet wide and transition to 12 feet wide at MP 7.3 in KEFJ. Between MP 1.3 and MP 6.4, the soft surface pathway will meander farther from the road and follow existing trails where feasible (trails in ADNR lands will need to go through a regulatory process and easement permitting to be designated as non-motorized). From MP 7.3, the trail will be separated from the existing roadway by a 10 foot (minimum) vegetated buffer. There will be new trail bridges over minor drainages for the trail separated from the roadway (see Table 1). The separated trail will be managed for non-motorized winter uses, and snowmachines will not utilize the new separated trail in winter.

Table 1: Summary Description of Alternative B

Start MP	End MP	Description	Specifications	Section
0	1.3	<ul style="list-style-type: none"> • 10' paved pathway along the north side of Herman Leirer Road • 5' (minimum) separation zone between pathway and existing roadway 	<ul style="list-style-type: none"> • 2" asphalt • 4" aggregate base (shoulder extends 2' beyond asphalt on either side) • 12" gravel sub-base 	10' Paved Pathway – Separated
1.3	7.3	<ul style="list-style-type: none"> • 10' soft surface pathway along the north side of Herman Leirer Road, using existing trails where feasible • 5' (minimum) separation zone between pathway and existing roadway 	<ul style="list-style-type: none"> • 2" recycled asphalt (unbound material) • 4" aggregate base (shoulder extends 2' beyond asphalt on either side) 	10' Soft Surface Pathway – Separated
7.3	8.2	<ul style="list-style-type: none"> • 12' paved shared use pathway along the north side of Herman Leirer Road • 10' (minimum) separation zone between pathway and existing roadway 	<ul style="list-style-type: none"> • 2" asphalt • 4" aggregate base (shoulder extends 2' beyond asphalt on either side) • 12" gravel sub-base 	12' Paved Pathway – Separated

Alternative C, Minimum Separation Roadside Trail

A 12 foot wide soft pathway would be added to the north side of Herman Leirer Road, separated from the road by a 5 foot vegetated buffer. Existing trails on ADNR land and within the Chugach National Forest would remain open to hiking, mountain biking and non-motorized winter uses (trails in ADNR lands would need to go through a regulatory process and easement permitting to be designated as non-motorized). Connections to these existing trails would be improved. This alternative would include widening the existing bridges (where feasible) to accommodate trail use (see Table 2). The separated trail would be managed for non-motorized winter uses, and snowmachines would not utilize the new separated trail in winter.

Table 2: Summary Description of Alternative C

Start MP	End MP	Description	Specifications	Section
0	8.2	<ul style="list-style-type: none"> • 12' soft surface pathway along the north side of Herman Leirer Road, using existing trails where feasible • 5' (minimum) separation zone between pathway and existing roadway 	<ul style="list-style-type: none"> • 2" recycled asphalt (unbound material) • 4" aggregate base (shoulder extends 2' beyond asphalt on either side) 	12' Soft Surface Pathway - Separated

Alternative D: No Separation Road Edge Trail and Upgrades to Existing Trails

For most of the length of the corridor, the existing road (currently with 12 foot wide driving lanes and 4 foot paved shoulders) would be reconfigured and restriped to 10 foot driving lanes and 6 foot paved shoulders marked as bicycle lanes. Existing hiking trails would be upgraded to soft surface trails suitable for pedestrians, hikers, off-road cyclists and non-motorized winter uses (trails in ADNR lands would need to go through a regulatory process and easement permitting to be designated as non-motorized). Between Seward Highway and MP 1.3, and between MP 7.3 and Kenai Fjords Exit Glacier Nature Center, a 12' wide paved pathway would be installed. This alternative also includes lane and pathway reconfiguration on the bridges (see Table 3).

Table 3: Summary Description of Alternative D

Start MP	End MP	Description	Specifications	Section
0	1.3	<ul style="list-style-type: none"> • 12' paved shared use pathway along the north side of Herman Leirer Road • 5' (minimum) separation zone between pathway and existing roadway 	<ul style="list-style-type: none"> • 2" asphalt • 4" aggregate base (shoulder extends 2' beyond asphalt on either side) • 12" gravel sub-base 	12' Paved Pathway - Separated
1.3	3.7	<ul style="list-style-type: none"> • Reconfigure existing roadway to accommodate 6' bike lanes on both sides • Upgrade existing ski/hiking trails to 5-6' soft surface trails 	<ul style="list-style-type: none"> • Re-stripe roadway • Bikeway signs • 4" base course materials for trails 	Pathway on Existing - Connected
3.7	7.3	<ul style="list-style-type: none"> • Reconfigure existing roadway to accommodate 6' bike lanes on both sides • Upgrade existing ski/hiking trails to 5-6' soft surface trails 	<ul style="list-style-type: none"> • Approximately 4' of new paving and base to match existing road • Re-stripe roadway • Bikeway signs • 4" base course materials for trails 	Pathway on Existing - Connected
7.3	8.2	<ul style="list-style-type: none"> • 12' paved shared use pathway along the north side of Herman Leirer Road • 5' (minimum) separation zone between pathway and existing roadway 	<ul style="list-style-type: none"> • 2" asphalt • 4" aggregate base (shoulder extends 2' beyond asphalt on either side) • 12" gravel sub-base 	12' Paved Pathway – Separated

PUBLIC INVOLVEMENT

The EA was issued for public review and comment from April 9, 2013 to June, 7, 2013. The public comment period from the onset was opened for 60 days, instead of the required 30 day period, to ensure that the public had adequate time to review the document. Notices of the availability of the EA were sent by mail or email to government agencies, tribal entities, interest groups and individuals. The EA was posted on NPS Planning, Environment and Public Comment (PEPC) website at <http://parkplanning.nps.gov/> and on the park's website at www.nps.gov/kefj/. The park issued a press release about the availability of the EA and the open comment period on April 9, 2013. Six written comments were received.

The public comments received did not change the conclusions in the EA about the environmental effects of the action. The NPS responses to all comments are found in the attached public comment sheet.

DECISION

The NPS decision is to select Alternative B, Meandering Separated Trail, along with the mitigating measures. No modifications are proposed from the alternative B described above. Additional diagrams are located below in Figure 1.

MITIGATING MEASURES

Wildlife (including Fish)

Construction will take place during the ADF&G-recommended in-water work period, reducing the potential for adverse impacts. Bridges will be designed to allow free fish passage and to not constrict the waterway. Vegetation clearing activity will not be undertaken between April 1 and July 15 to prevent impacts to migratory birds, and active nests will be protected.

Vegetation

Disturbed areas will be revegetated with native plant species. Dust control measures will be used to address fugitive dust during construction to prevent exceeding the National Ambient Air Quality Standards for this Class II air quality area. Non-native plant species will be controlled under a dedicated program of monitoring, identification, removal and treatment in order to protect native species composition. Off-site wetland mitigation through rehabilitation of former wetland areas will be done, and detailed in a future implementation environmental assessment.

Soils and Hydrology

Erosion and sediment control measures will be in place during construction.

Cultural Resources:

Excavation activities will be monitored by an archeologist.

Visitor Experience:

Mufflers for noise control will be used.

Safety:

Since the project will attract and encourage non-motorized users to cross the Seward Highway at the trail junction near the Herman Leirer Road, a safety analysis will be completed as part of design phase of the project. It will evaluate and resolve the safety questions of gaps, sight distance, and safe crossing of the Seward Highway especially by bicycles. As part of design phase of the project, a safety analysis will also be done to consider adequate sight distances along the trail to reduce negative bear-human encounters. The use of bollards, boulders or gates near the road will be subjected to a clear zone review before designing. Trailhead signs or kiosks will be installed to provide bear safety information.

Rationale for the Decision

This selected alternative satisfied both the purpose and need of the project. The purpose of the project is to increase the recreational opportunities and public safety along Herman Leirer Road, the popular entrance road to the Exit Glacier area of Kenai Fjords National Park. The need for the action is to address safety issues and visitor use conflicts along the road. The goals are to provide increased safety and a more enjoyable recreational experience for both trail users and road users by separating conflicting uses.

Currently during summer months, the paved road is open as a regular public thoroughfare which dead ends at the NPS Nature Center. During winter months, the road is closed to regular vehicle traffic at Milepost (MP) 1.3 and is open the remainder of the distance to snowmachines and a commercial snowcoach. Bicycles, hikers, dog walkers, and joggers use the same roadway as motor vehicles during the summer. Skiers, winter bicycles, showshoers, hikers, and dog mushers use the same road as the snowmachines and over-snow shuttle during the winter. Pedestrians use the road year round for walking, starting backpack trips, jogging, dog walking, and running. The proposed trail will separate the mountain bikes, skiers, dog mushers and pedestrians from the roadway and motorized vehicles.

The selected action, Alternative B, the Meandering Separated Trail, will satisfy the purpose and need of the project better than other alternatives because the multi-modal trail has greater separation from the paved roadway and will provide a safer route during the summer months compared to a trail located adjacent to the road and with minimum separation distances.

The Meandering Separated Trail will be located the greatest distance from the existing roadway and will affect the greatest acreage of wildlife habitat (estimated 10-18 acres), vegetation (estimated 10-18 acres), wetlands (estimated 0.5-1.0 acres), floodplains (estimated 10-18 acres), and soils (estimated 10-18 acres). However, this trail will be safer from road traffic for trail users in addition to providing a more rustic trail experience that will be expected to draw additional users.

Alternative A, No Action, would not accomplish the purpose and need of the project. No trail would be constructed along the Herman Leirer Road from its start at Seward Highway to its end at the Exit Glacier parking lot. Non-motorized users would still need to share the Herman Leirer Road with motorized vehicles.

Resurrection River

0 5 10 Feet

Buffer Path

An aerial photograph of a residential area. A road runs horizontally across the middle, with a car on it. To the left of the road is a river. To the right of the road is a path. There are trees and houses in the background.

Diagram illustrating the proposed road layout for the Glacior Ranch. The plan view shows a road with a 16' buffer zone and a 12' buffer zone. The road is labeled with 'E' and 'W' at the ends.

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DATE	PREPARED BY	REVIEWED BY

FIGURE 231

Figure 1. Selected Alternative, Alternative B—Meandering Separated Trail

Alternative C, Minimum Separation Trail, does impact less acreage than the selected alternative, but was not chosen because the recreational experience would be less rustic and have a diminished visitor experience than the selected alternative. The majority of the trails would be separated from the existing roadway by a 5-foot vegetated buffer, which would increase the roadway noise for the trail user as well as not being as safe as a wider buffer, although existing trails would have been adopted for the trail whenever possible.

Alternative D, No Separation Road Edge Trail and Upgrades to Existing Trails, poses the greatest safety concerns for the trail users although it has the least amount of impact to acreages for the action alternatives. Because this alternative focuses on restriping the existing roadway from a 12 foot wide driving lane with 4 foot paved shoulders to a 10 foot wide driving lane with 6 foot paved shoulders marked as biking lanes, there would be no separation between the trail users and the roadway drivers. While existing trails would be tied into whenever possible, much of the trail would be on the roadway marked as a bicycle lane.

SIGNIFICANCE CRITERIA

The preferred alternative will not have a significant effect on the human environment. This conclusion is based on the following examination the significance criteria defined in 40 CFR Section 1508.27.

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

The selected alternative will have both adverse and beneficial impacts. The EA demonstrated that none of the effects are significant. The effects of the selected alternative were evaluated on wildlife and habitat, vegetation, wetlands, floodplains, soils, recreation, transportation and safety, and socioeconomics. Minor adverse impacts from the future trail construction activities and increased non-motorized traffic on the trail will occur for wildlife and habitat, vegetation, wetlands, floodplains, and soils. A moderate beneficial effect will be seen on recreation by providing a new non-motorized 8.2 mile trail along the length of Herman Leirer Road, and on transportation and safety by providing a safer mode of transportation for non-motorized users year-round through a wide separation between non-motorized users and vehicles on the roadway. A minor beneficial effect on socioeconomics will be seen by providing new recreation opportunities to local residents and in-state visitors which may lead to increases in local equipment rentals such as mountain bikes.

(2) The degree to which the proposed action affects public health or safety.

The selected alternative will improve visitor safety by providing a trail for non-motorized users away from the Herman Leirer Road. For example; during the winter months, non-motorized users such as skiers and dogsled mushers will be able to avoid snowmachiners on the roadway and during summer months, mountain bikers and hikers will be able to avoid cars on the roadway.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetland, wild and scenic rives, or ecologically critical areas.

The multi-modal trail will pass through public lands and right-of-ways managed by the State of Alaska, U.S. Forest Service, and the National Park Service. The Herman Leirer Roadway currently parallels the Resurrection River and will lie between the river and the proposed trail. Because of this, there are wetlands and floodplains that will be affected, but are not unique in thousands of acres of similar wetlands along the Resurrection River and associated creeks.

(4) The degree to which effects on the quality of the human environment are likely to be highly controversial.

Based on previous public scoping and the comments received on the EA, the effects presented in the EA are not highly controversial. While the public comment period was purposefully open for 60 days in order to encourage public participation, only six comments were received from the public.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The selected alternative is not known to include any unique or unknown risk or is likely to result in any highly uncertain impacts to the human environment.

(6) The degree to which the action may establish a precedent of future actions with significant effects or represents a decision in principle about a future consideration.

This EA presents the analyses of the feasibility of a trail along Herman Leirer Road across various jurisdictions managed by the State of Alaska, Chugach National Forest, and Kenai Fjords National Park in Seward, Alaska. It is only binding for the National Park Service and serves as a common vision for state, federal, and local agencies as well as organizations to pursue funding for such a project by any number of sources. Additional site-specific environmental analyses of on-the-ground project details will be required prior to project implementation.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

This environmental analysis looks conceptually at the larger overall project to determine the feasibility of this future interagency venture. No significant impacts are anticipated, although wetlands and floodplains issues will need to be thoroughly addressed in future site-specific environmental analyses.

(8) Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

The presence of National Register eligible structures or artifacts is not anticipated due to the recent glacial activity in the area. The road corridor is not historic and no significant cultural sites have been previously identified along the road corridor. Future site-specific environmental analyses will still be required prior to project implementation. The project's area of potential effect may be surveyed by qualified archeologists prior to project approval. If cultural resources are found during project surveys, the State Historic Preservation Officer will be consulted, as well as the appropriate tribal entities.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

There are no endangered or threatened species or critical habitat expected to be affected. However, future site-specific environmental analyses will be required prior to project implementation to confirm, and also to check for additional species added in the interim.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

No federal, state or local laws or requirements imposed for the protection of the environment will be violated by implementing this action. However, future site-specific environmental analyses will be required prior to project implementation, and several federal and state permits will be needed.

FINDINGS

The selected alternative complies with the NPS Organic Act, ANILCA, the Endangered Species Act, the National Historic Preservation Act, the Clean Water Act, and Executive Orders 11988 (floodplains), 11990 (wetlands), and 12898 (environmental justice). There will be no significant restriction of subsistence activities as documented by the Alaska National Interest Lands Conservation Act, Title VIII, Section 810(a) Summary Evaluation and Findings.

The National Park Service has determined that the selected alternative does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with the National Environmental Policy Act of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement is not needed and will not be prepared for this project.

ATTACHMENT A

NPS RESPONSES TO PUBLIC COMMENTS and ERRATA for the Kenai Fjords National Park EA for the Herman Leirer Road Multi-Modal Trail Feasibility Study

This attachment provides NPS responses to public comments. There were no amendments to the subject environmental assessment (EA) for errors.

PUBLIC COMMENTS

Six public comments were received during the review period. Comments were favorable for the project and the selected alternative, Alternative B, a meandering separated trail, or they did not mention an alternative preference. Three comment letters mentioned benefits of the trail to themselves personally.

Comment 1: Suggests upgrading the trail from a soft surface to a paved surface in the future.

Response 1: A paved surface was not provided for in the proposal from MP 1.3 to MP 7.3, but if funds were available in the future, the trail surface could be changed. Even the soft surface in the existing plans will comfortably accommodate a wheelchair or mountain bike. A change to all-pavement would require another look at environmental impacts, but it might be able to be accomplished with a simple categorical exclusion. Public scoping might be appropriate for such future increase in the scope of the project.

Comment 2: The trail is necessary for public safety, separating the trail use from the road traffic.

Response 2: We agree that public safety is a significant purpose for the trail and that Alternative B would provide the greatest separation from traffic.

Comment 3: The trail should not interfere with adjacent private property owners.

Response 3: The trail will not cross onto private property. The first 1.3 miles of the trail is adjacent to private businesses and residential properties and the trail will stay on the existing Alaska Department of Transportation road right-of-way for the Herman Leirer Road (Exit Glacier Road). No change in right-of-way is proposed. This first 1.3 miles, the trail will be paved rather than soft surface trail as a neighborhood amenity and given larger use volumes and a different user base.

Comment 4: Wildlife and other natural features should not be disturbed by the new trail.

Response 4: With new ground disturbance and construction of a new trail, there will be long-term and short-term disturbances to wildlife, plants and other aspects of nature. However these negative impacts will be minor, and are outweighed by the long-term improvements to recreation and safety.

Comment 5: More people in the U.S need to be introduced to the beauty of cycling. It is a great mode of transportation as well as being environmentally friendly, healthy, and leaves a lower carbon footprint than cars.

Response 5: We agree, but promoting cycling is not a purpose of the trail proposal.

Comment 6: The trail would be another good reason for visitors to stay and play around Seward.

Response 6: We agree, and we determined the trail would have a minor benefit to socioeconomics in the area, however we did not do a detailed economic analysis of the benefits of the project.

Comment 7: Hunters and angler access on NPS, USFS, and ADNR lands includes year-round non-motorized access and winter motorized access, and summer motorized access on ADNR lands.

Response 7: We agree that with the multi-modal trail addition, access would not change; however, motorized vehicles would not be allowed to use the multi-modal trail. We recognize that on state lands, there are currently no trails within the project area with legal standing; before motorized use could be restricted for trails on ADNR lands, a subsequent application for easement to ADNR would need to include this request and an additional regulatory process would be required before motorized use could be restricted for trails on state lands.

Comment 8: Conduct a safety analysis to ensure adequate sight distances along the trail to reduce negative bear-human encounters

Response 8: Prior to project implementation, a more detailed environmental compliance analyses will be required to site the specific trail. A safety analysis will be conducted at this time.

Comment 9:

If an easement application is approved allowing the trail to cross state land, the applicant will be responsible for such things as constructing, surveying, and maintaining the trail, as well as trail enforcement.

Response 9: We agree that prior to implementing the trail building project, there would need to be agreement on responsibilities for trail construction and management.

ERRATA

No errata were found in this document, besides from minor typographical errors which did not significantly change the analyses or content of the EA.

ATTACHMENT B

NON-IMPAIRMENT DETERMINATION

Herman Leirer Road Multi-Modal Trail Feasibility Study

The NPS Organic Act of 1916 and the General Authorities Act of 1970 prohibit impairment of park resources and values. The 2006 NPS Management Policies use the terms “resources and values” to mean the full spectrum of tangible and intangible attributes for which the park is established and managed, including the Organic Act’s fundamental purpose and any additional purposes as stated in the park’s establishing legislation. The impairment of park resources and values may not be allowed unless directly and specifically provided by statute. The primary responsibility of the NPS is to ensure that park resources and values will continue to exist in an unimpaired condition that will allow people to have present and future opportunities for enjoyment of them.

A determination of impairment is made for each of the resource impact topics carried forward and analyzed in the Herman Leirer Road Multi-Modal Trail Feasibility environmental assessment for the preferred alternative (Alternative B, *Meandering Separated Trail*). The description of park significance in Chapter 1 and other documents such as the park’s enabling legislation were used as a basis for determining if a resource 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 as a goal in the park’s general management plan or other relevant NPS planning documents.

Impairment determinations are not provided for recreation, transportation and safety, and socioeconomic resources because impairment determinations relate back to park resources and values. These impact areas are not considered to be park resources or values subject to the non-impairment standard.

Wildlife and Habitat

The selected alternative, Alternative B, will affect terrestrial wildlife through the loss of approximately 10-18 acres from trail construction acre of habitat. Restrictions on vegetation clearing from April 15 until July 15 will protect nesting birds from direct disturbance. There may be some loss of nesting habitat, but an abundance is available in the vicinity. Of the five Species of Special Concern known to occur in the project area, only the Townsend’s warbler potentially breeds there; the rest, including the brown bear, are rare or uncommon visitors. During the construction period noise and human activity will disturb wildlife and cause some individuals to be temporarily displaced from the affected and adjacent areas. Displaced animals will likely move to adjacent areas of similar habitat, which is common throughout the vicinity. Some small mammals, such as snowshoe hare and red-backed voles, will potentially experience direct mortality during construction activities.

Habitat degradation from nonnative plant species is another wildlife concern. Construction activities in new areas could introduce non-native species that may become invasive and displace native species. Mitigation measures will include procedures to prevent the introduction of exotic plant species during construction, and monitoring after construction.

Construction of three new approximately 14-foot wide bridges could have direct adverse impacts on anadromous fish habitat, unless existing vehicular bridges were retrofitted. Construction could cause short-term water quality impacts, but erosion and sediment control mitigation measures will be in place during construction and are expected to reduce the level of impact to minor. To mitigate disruption to fish migration or spawning, construction will take place during the ADF&G recommended in-water work period, eliminating this potential adverse impact.

There will also be a minor increase in human activity during visitor use seasons. While the low intensity impact would be long-term in duration, the size of the area affected is relatively small compared to the available adjacent similar habitat. The wildlife and habitat in the area are considered important in context, because birds are identified in the park purpose. However, wildlife and habitat potentially affected by the proposed project are not rare in the project area or in vicinity of the park. The overall impact of this action will be minor and will not result in impairment to wildlife resources.

Vegetation

The selected action will remove approximately 10-18 acres of deciduous forest, evergreen forest, mixed forest, and shrub/scrub vegetation along the 8.2 mile trail corridor. The native vegetation will be replaced with recycled asphalt or aggregate, and will affect a relatively small area. These vegetation types are abundant in the surrounding area. Construction activities disturbing soils and causing dust will be minimized by mitigation measures stipulating that all disturbed areas will be revegetated with native plant species and dust will be controlled during construction. There is an increased potential for the introduction or spread of non-native plant species which would need to be closely managed. Indirect adverse impacts to vegetation will also occur if additional or side trails are created adjacent to the proposed trail. This potential impact will be avoided by maintaining the trail to discourage social trail development. The loss of vegetation and ground disturbance will result in a minor adverse impact to vegetation, but these impacts will not degrade the quality of area-wide biological resources and will not result in impairment.

Wetlands

The selected alternative B will directly impact a total of 0.5 to 1.0 acre, with approximately 0.6 acre (plus or minus 15%) of freshwater forested/shrub wetland and 0.1 acre (plus or minus 15%) of freshwater pond, and will indirectly impact adjacent wetlands by altering their hydrology. To avoid the introduction of sediment from disturbed soils into adjacent wetlands, silt fencing and other erosion control measures will be used during construction. Off-site wetland mitigation through rehabilitation of former wetland areas will be done, and detailed in a future implementation environmental assessment. In the future implementation environmental compliance, a wetlands Statement of Findings will be included in the Appendix for the NPS portion of the project. However, because most of the wetland resources within a half-mile of the

road are located outside of the project area, the impact to the wetlands from this project will not cause impairment.

Floodplains

Flooding remains the largest concern within the Resurrection River watershed and the proposed project area. The selected Alternative B will increase impervious surface area within the corridor, which will contribute to runoff issues and/or increased flooding and road wash-out potential for Exit Creek and the Resurrection River in respect to Herman Leirer Road. The direct and indirect impacts to floodplains due to implementation of this alternative will be low in intensity; the surface of approximately 10 to 18 acres of land along the 8.2 mile trail corridor will be altered due to trail construction. The duration of impacts will be long-term, lasting the life of the trail. The context is considered common, as floodplains are not identified in the enabling legislation for the park and are not considered rare within or outside the park area. A Statement of Finding for floodplains will be written as part of the site-specific project implementation environmental compliance; however, the overall impact to floodplains will not cause impairment.

Soils

The selected Alternative B will increase impervious surface area within the corridor by approximately 10 to 18 acres along the 8.2 mile trail corridor, which will contribute to soil erosion and existing flood-prone areas within the project area. Within the project area, the course of the Resurrection River is controlled primarily by artificial influences. The Herman Leirer Road acts as an artificial channel wall along the north and east side of the Resurrection River. Channels of the Resurrection River currently flow up against the road bed in five areas, in some places requiring riprap to stabilize and protect the road from erosional damage. Impacts to soil will be temporary during the construction phase, but will persist in the long-term during the operations of the trail. The soils resource is considered common in context, as it is not identified in the enabling legislation for the park and is not considered rare in the project area or the park vicinity. The overall impact to soils will not result in impairment.

SUMMARY

The level of impacts to wildlife and habitat, vegetation, wetlands, floodplains, and soils from implementing Alternative B, *Meandering Separated Trail*, will not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or that are key to the integrity of the park.

-- end --