

FINDING OF NO SIGNIFICANT IMPACT

Additions and Improvements to the Horseshoe Lake Trail

Denali National Park and Preserve, Alaska February 2014

The National Park Service (NPS) prepared an environmental assessment (EA) to evaluate alternatives for trail additions and improvements to the Horseshoe Lake Trail in Denali National Park and Preserve.

The NPS has selected Alternative 2, to extend the Horseshoe Lake Trail around the lake and along the Nenana River.

Responses to public comments are found in Attachment A. An Errata section has been provided in Attachment B that provides clarifications, modifications or additional information to the EA.

ALTERNATIVES

Two alternatives were evaluated in the EA.

Alternative 1 – No Action – Existing Conditions

Under this alternative the NPS would not extend the Horseshoe Lake Trail and visitors would continue to travel around the lake by any route they choose. The peninsula would continue to receive heavy use and compaction of beaver dams from visitors walking on them would continue. Existing social trails would continue to be used and new social trails may be established.

Alternative 2 – Create loop trail around Horseshoe Lake and rehabilitate social trails (Selected Alternative)

Under this alternative the NPS will extend the Horseshoe Lake Trail around the lake and along the Nenana River. One bridge, one log puncheon, and two short sections of boardwalk will be constructed. The existing planks leading to the peninsula area will be removed and signs used to deter traffic from the peninsula to prevent further impacts to wildlife and the large active beaver lodge located adjacent to it. A trail to an overlook will be created along an existing social trail on the ridge south of the lake. Social trails will be revegetated and signed to encourage visitors to remain on the maintained trail.

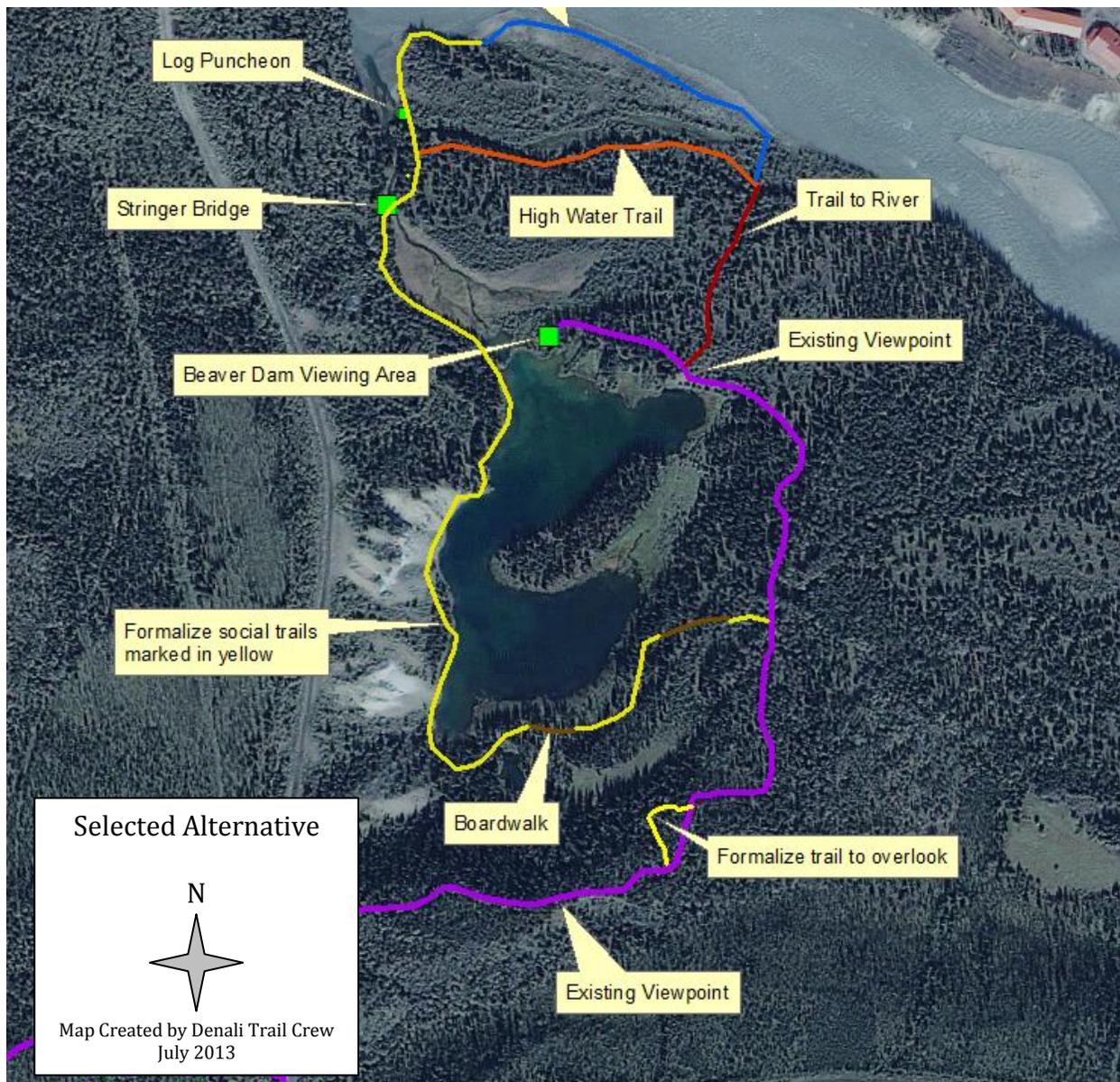
Materials will be brought in by hand, dog team, power wheelbarrows, river raft, and/or helicopter. All helicopter use in Denali involves detailed planning and approval by the park's Aviation Officer and Park Superintendent. If possible, helicopter use will be done prior to peak visitor use periods. Trail crew will use power wheelbarrows, plate compactors, chainsaws, and an assortment of hand tools during trail construction. Cable hoists and rigging systems will be used to move stumps and rocks, as well as assist during

bridge and puncheon construction. A generator and power carpentry tools will be used during construction of the bridge and boardwalk.

The boardwalk will be covered in heavy fishnet if the walking surface becomes slippery.

Interpretive signs will be added on either side of the trail to interpret the cultural and natural features of the project area. Small signs will be installed to indicate revegetation areas.

The park's trail crew will salvage as much in the way of vegetation mats as is possible during construction of the trail re-routes for use in revegetating social trail segments.



Environmentally Preferable Alternative

Alternative 2 is identified as the Environmentally Preferred Alternative because it rehabilitates and prevents further social trail development and the resulting impacts to vegetation, soils, and wildlife. It also improves visitor experience by providing a short trail around the lake. It avoids wetland impacts with boardwalks, log puncheons, and a foot bridge.

PUBLIC INVOLVEMENT

The public comment period for this project occurred from December 11, 2013 – January 22, 2014. The EA was posted on NPS's Planning, Environment and Public Comment (PEPC) website. A news release was sent to 40 media outlets, which included newspapers, wire services, radio, TV, and online publications. The news release was also sent to local, state, and federal agencies, Alaskan military bases, and political officials. In addition, over 100 businesses and organizations received the news release.

The NPS received 7 pieces of correspondence on the EA. Correspondence was received through the PEPC website and email. One government agency/representative responded. One comment was received from an environmental organization. The remaining 5 pieces of correspondence were from individuals. The 7 comments received were all supportive of the project to extend the trail.

DECISION

The NPS decision is to select Alternative 2 as described above (Create loop trail around Horseshoe Lake and rehabilitate social trails (NPS Preferred)) along with mitigating measures.

Mitigation Measures

Mitigation measures are specific actions that when implemented reduce impacts, protect park resources, and protect visitors. The following mitigations will be implemented under alternative 2 and are assumed in the analysis of effects.

The following mitigation measures apply to the selected Alternative 2.

Vegetation

- Vegetation mats that need to be removed in order to construct the trail will be saved and used to revegetate abandoned trail segments and social trails.
- Periodic surveys will be conducted to determine the presence of exotic plants, and if found, the Vegetation Specialist will be consulted to determine the best course of action.
- Trails Supervisor will work with the Vegetation Specialist to determine the best course of action for revegetation efforts.

Wildlife and Habitat

- The NPS will follow established guidelines in the park's bear-human conflict management plan. The plan requires staff to use bear-proof containers for food and refuse, and sets up guidelines for temporary closures.

- Construction areas will be kept free of debris and will be checked at the end of each day for small objects that could be ingested by wildlife.
- To avoid destroying and/or disturbing occupied bird nests and cavity trees within the project area, in accordance with the Migratory Bird Treaty Act (MBTA), park staff will take several measures including:
 - 1) not cutting or removing vegetation during the nesting season for most species of birds (May 1 to August 1);
 - 2) conducting a site-specific survey in April before the project begins to locate occupied nests of species that begin nesting before May 1 (i.e., owls, corvids) and implement appropriate protective measures to protect occupied nests;
 - 3) conduct a site specific survey in May to locate occupied nests of waterfowl, shorebirds and kingfishers and provide recommendations for protecting occupied nests;
 - 4) provide recommendations for protecting nest trees for cavity nesting species such as Barrow's Goldeneye, American Kestrel, Boreal Owl, and Northern Flicker; and
 - 5) implement appropriate protective measures to protect any occupied bird nest discovered within the project area during the construction phase.

Cultural Resources

- If cultural resources or items protected by the Native American Graves Protection and Repatriation Act are discovered during this project, all project related activities in the vicinity of the discovery will be stopped and the park archaeologist will be notified immediately. Denali National Park and Preserve, in consultation with the State Historic Preservation Officer and other consulting parties, will determine a course of action per 36 CFR Part 800.13.
- Park archaeologist will determine if periodic monitoring of ground disturbance for the trail and bridge construction will be needed.
- Interpretation staff will work closely with Park Archeologist to develop language for any signs interpreting cultural resources.

Visitor Experience and Opportunity

- Visitors will be advised in park announcements, programs, and publications when there will be temporary inconveniences from construction work on the trail.
- If helicopters are used to transport materials, efforts will be made to complete flights prior to peak visitor season.

Rationale for the Decision

The selected action (Alternative 2, Create loop trail around Horseshoe Lake and rehabilitate social trails) will satisfy the purpose and need of the project better than the other alternative because it protects resources while providing a safe and sustainable trail for visitors to enjoy. This trail work is needed because substantial pedestrian use has caused resource damage on unsustainable route locations.

Significance Criteria

The selected alternative (Alternative 2) will not have a significant effect on the human environment. This conclusion is based on the following examination of the significance criteria as 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.

Alternative 2 will have negligible to minor beneficial impacts to vegetation, soils, and wetlands; wildlife values and habitat; and cultural resources. Evaluations also included moderate benefits to visitor experience and opportunity.

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

Minor beneficial impacts to public health and safety will occur since visitors will be able to use well-constructed trails instead of narrow social trails.

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

The environmental effects of Alternative 2 will not have a significant effect on historic or cultural resources, farmlands, wetlands, rivers, or other critical areas. The Horseshoe Lake Trail is eligible for listing on the National Register of Historic Places.

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

The effects on the quality of the human environment are not controversial. The EA was distributed to over 200 agencies, organizations, and individuals for review. The NPS received 7 comments that were all supportive of the project to extend the trail. The environmental analysis concluded that alternative 2 will have no more than minor impacts.

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

The environmental effects of the selected alternative (Alternative 2) will not involve unique or unknown risks.

(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.

Alternative 2 will not establish a precedent since many front country trails are already in existence.

(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.

The actions in Alternative 2 will not significantly contribute to cumulative impacts of any of the impact topics evaluated. These impact topics included visitor experience, wilderness character, soundscape, socioeconomics, cultural resources, and vegetation, wetlands, and soils; wildlife values and habitat; cultural resources; and visitor experience and opportunity.

(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 selected alternative will have no adverse effect on historic properties. Concurrence from the State Historic Preservation Officer was received on March 25, 2013.

(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.

The selected alternative will not adversely affect an endangered or threatened species or critical habitat.

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

The selected alternative (Alternative 2) will not violate any Federal, State, or local law.

FINDINGS

The selected alternative complies with the NPS Organic Act, the Alaska National Interest Lands Conservation Act, and the park's General Management Plan. There will be no restriction of subsistence activities since subsistence use is not allowed in the project area under Title VII of ANILCA.

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 for the Environmental Assessment for Additions and Improvements to Horseshoe Lake Trail in Denali National Park & Preserve

The NPS has read and considered all comments received on the environmental assessment for the Additions and Improvements to Horseshoe Lake Trail. A substantive comment is defined as one which leads the NPS to: (1) modify an alternative, including the proposed action; (2) develop and evaluate an alternative not previously given serious consideration; (3) supplement, improve, or modify the environmental analysis; (4) make factual corrections. The NPS received 7 comments on the plan and all were supportive of the preferred alternative. Substantive comments are addressed individually here.

Habitat

Comment: The EA should state just how many feet of social trails are estimated to be re-vegetated under this plan. Such a figure could be incorporated into Table 1 on page 10. We assume NPS plans to re-vegetate and discourage the use of all the social trails mapped on page 5 that are not planned to be incorporated into the new trail. Is this an accurate assumption?

Response: The map on page 5 of the EA shows several miles of social trails. There may be additional social trails that are not shown on the map. Some trails that may appear to be social trails are actually beaver trails. Beaver trails will not be revegetated. Social trails will be revegetated but may remain visible for a long period of time. Small signs will be placed where the revegetated social trails intersect the main trail to encourage visitors to remain on the provided route.

Comment: An estimation of the number of helicopter trips required for this project would be appreciated, rather than simply a statement that care would be taken with use of helicopters. We do not see much need for more than a trip or two. Is that a fair estimation?

Response: The maximum number of helicopter trips needed is approximately 50 (14 for bridge materials and planks; 36 for gravel). Attempts will be made in April to haul in bridge materials and planks by dog sled reducing the number of flights to 36. Using a helicopter to haul gravel is considered to reduce impacts to visitors and improve safety for the trail crew. Hauling gravel by helicopter can be done in a relatively short period of time compared to weeks of hauling gravel by wheelbarrow and disrupting traffic on the trail.

With the availability of the NPS leased AStar350 helicopter, Denali's Trail Crew has moved large volumes of material efficiently over the past 3 seasons. The lift capacity of the ship and experienced pilot allows precise deliveries of loads of up to 1 ton every 4-6 minutes. In May of 2012, the AStar delivered 44 tons of gravel and 11 loads of logs to the Horseshoe Lake Trail in 6 hours of flight time. In July of 2013, 154 loads were delivered to the Healy Overlook Trail over 2 days.

The alternative at Horseshoe Lake is to carry materials across a train track, down a steep 25% grade for a third of mile, and then across wetlands. The risk to employees and damage to the resource by carrying materials for 2-3 weeks is weighed against flying materials for 5 hours. Gravel materials needed for filling in trenched trails are not readily available on site. Borrow pits would provide mostly sand and organic materials and leave a significant impact.

Comment: Interpretive signage – we are definitely in favor of letting resources speak for themselves. Please reconsider all interpretive signs. Signs should be limited to those that will keep visitors from using social trails. If interpretive signs must be used, limit them to areas with standing room, such as the overlook or beaver dam viewing areas.

Response: All signs placed along the Horseshoe Lake Trail will require approval by park management. Signs necessary for safety and resource protection will have priority over interpretive signs. Viewsheds will be considered during approval of all signs.

Safety

Comment: The early, existing section of the trail, from the railroad to the forest floor, has steep sections and tripping hazards associated with roots. Remediation of more problematic areas here is advisable but not discussed in the EA.

Response: Improvements were made to this section of the trail in 2012. There are no roots exposed in this section of trail and some of the steep sections were rerouted and are less steep. There is no way to eliminate all steep sections of the trail without substantial switchbacks that would require the removal of substantial more vegetation.

Comment: The formalized social trail along the western edge of the lake will be underneath a steep slope immediately below the Alaska Railroad. We have some concerns regarding protection of the trail from slope erosion and falling rock, as sections of this slope are unstable.

Response: Annual trail maintenance will be performed to remove fallen rocks from the trail. Trail crew will remove any loose rocks from above the trail as part of the construction and maintenance of this trail. Visitors are already traveling this section of trail.

Visitor experience

Comment: The EA considers the impacts of the Action Alternative to be “beneficial” to visitor experience, through provision of increased opportunities for trail hiking. However, any encouragement of use offered by creating this new trail must also be considered as potentially damaging both to resources and to visitor experience because of the location of the Horseshoe Lake Trail so near major concentrations of visitors.

Response: An improved and compacted trail will encourage visitors to remain on the trail. Currently no limits are placed on the number of visitors in any area of the front country other than commercially guided groups. If overcrowding becomes a problem at Horseshoe Lake, management action may be necessary. It is not known what level of visitation will result in overcrowding at this time. Trail counters are regularly used to establish trail use. Park

management will consider trail counter data, visitor comments, and staff observations to inform this determination.

Comment: Do not allow commercial hiking groups other than MSLC or NPS-sponsored hikes.

Response: Guided commercial hiking is not currently allowed on the trail, though groups on tour without their guides do use the trail.

Comment: Limit use during peak visitation days and also if rainy weather creates dangerous conditions. NPS should monitor the use of this trail through counters and staff. While not something likely to be done very much, limitation of access should be considered. Visitors, when surveyed, have noted that having to share a natural area with too many others diminishes their experience. We'd hate to see the use of tickets or entry gates, however if the trail is overused and the experience deteriorates, such techniques may need to be considered and would, we think, be appreciated by users.

Response: Trail counters and observation are used often to monitor use of trails. If overcrowding becomes an issue, park management will determine the best course of action.

Comment: Consider limits on hiking group size for entrance area trails. We understand that establishing a limit for hiking group size in the entrance area may be beyond the scope of this EA. However, consideration of damage to entrance area trails by larger hiking groups and of large group effects upon visitor experience are within the scope of this EA. We hope that, in the FONSI for this project, NPS will commit to monitoring group sizes on well-used trails in the entrance area, with an eye to determining impacts and making recommendations. Such monitoring is essential in view of inevitable, predictable increases in visitation at the entrance to Denali.

Response: Ranger led hikes to Horseshoe Lake often draw a large group of 20 or even 30 visitors. Currently no limits are placed on the number of visitors in any area of the front country other than commercially guided groups. If overcrowding becomes a problem at Horseshoe Lake, management action may be necessary to limit the number of participants on Ranger led hikes to Horseshoe Lake.

ATTACHMENT B

ERRATA

An errata section provides clarifications, modifications or additional information to the EA. The modifications here do not significantly change the analysis of the EA and, therefore a new or revised EA is not needed and will not be produced.

1. **Modification** to page 9: Consultation with Alaska Department of Fish and Game was conducted and it was determined that a permit was not needed for this project.
2. **Modification** to page 14: Add the following to mitigation measures:
 - Annual trail maintenance will be performed to remove fallen rocks from the trail. Trail crew will remove any loose rocks from above the trail as part of the construction and maintenance of this trail.
 - If overcrowding becomes a problem at Horseshoe Lake, management action may be necessary. It is not known what level of visitation would result in overcrowding at this time. Trail counters are regularly used to establish trail use. Park management will consider trail counter data, visitor comments, and staff observations to inform this determination.

ATTACHMENT C

Determination of Non-Impairment Additions and Improvements to Horseshoe Lake Trail

The NPS Organic Act of 1916 and reaffirmed by the General Authorities Act of 1970 prohibits impairment of park resources and values. The 2006 NPS Management Policies uses 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 non-impairment is made for each of the resource impact topics carried forward and analyzed in the Additions and Improvements to Horseshoe Lake Trail environmental assessment for the selected alternative (Alternative 2). The description of park significance in Chapter 1 was 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 visitor experience/opportunity, socioeconomic resources, or park operations because impairment determinations relate back to park resources and values. These impact topics are not considered to be park resources or values subject to the non-impairment standard.

Vegetation, Wetlands, and Soils

In the mid-1920s, a number of fires burned over the entrance area. By 1939, when the Park Hotel opened near the railroad depot, mostly low shrubs and immature aspen and spruce trees dominated the area. Now taiga forest plant associations occur with mature white spruce and aspen dominating the vegetation. A variety of plant species comprise the understory, including alder, willows, Labrador tea, blueberry shrubs, and Alaska rose. Riparian zones are dominated by tall willow species, alder, and white spruce.

Three generic soil types occur in the project area. One soils type underlies upland forested areas and is gravelly or boulder filled, silty soil with humus layers supporting mosses and lichens. The second soil type occurs in wetland areas or in forest openings and it consists mostly of poorly drained silts and clays above thick gravel layers or bedrock. The third soil type is in the riparian areas, with a gravelly or boulder filled, silty soil without a well-developed organic layer.

Alternative 2 will be beneficial to vegetation, wetlands, and soils due to the small area affected by trail and boardwalk construction and the large number of social trails to be rehabilitated to a natural condition.

Wildlife Values and Habitat

The landscape surrounding the Horseshoe Lake Trail and the lake itself owes its existence to the beaver. Other common wildlife species in the project area are red fox, snowshoe hares, red squirrels, and various birds such as chickadees, ravens, magpies, and numerous migratory species. Wetland areas can provide important foraging areas for moose and habitat for small mammals, migratory and resident birds.

Alternative 2 will not significantly affect wildlife and habitat and will improve conditions for beaver by discouraging visitors from walking on top of the beaver lodges and dams.

Cultural Resources

Cultural resources in the park entrance area include archeological sites and historic buildings and structures. Approximately 25 cultural sites and features are located in the entrance area. The Horseshoe Lake Trail is historic and will not be adversely affected. Three other sites in the project area are not eligible for the National Register of Historic Places.

Alternative 2 will not affect historic properties and received concurrence from the State Historic Preservation Office with National Historic Preservation Act, Section 106, consultation under 36 CFR Part 800.5(3)(b) as “No Adverse Effect.”

SUMMARY

The level of impacts to vegetation, wetlands and soils; wildlife values and habitat; and cultural resources from implementing alternative 2 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.