

National Park Service
U.S. Department of the Interior

Bering Land Bridge National Preserve
Alaska

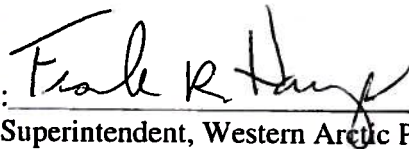


Finding of No Significant Impact

Grazing Exclosures

April 2012

Recommended:  4/24/12
Superintendent, Bering Land Bridge National Preserve Date

Recommended:  4/25/12
Superintendent, Western Arctic Parklands Date

Approved:  5/2/12
Regional Director, Alaska Date

FINDING OF NO SIGNIFICANT IMPACT

Grazing Enclosures Bering Land Bridge National Preserve, Alaska

The National Park Service (NPS) prepared an environmental assessment (EA) to evaluate a proposal by the Arctic Alaska Inventory and Monitoring Network (ARCN) to install 18 grazing enclosure fences (30 ft x 30 ft x 6 ft tall) in Bering Land Bridge National Preserve (BELA), on the Seward Peninsula, Alaska. Vegetation monitoring will occur every 10 years inside and outside the enclosures for the next 30 to 50 years. Access to the enclosures will be by helicopter.

The purpose of the project is to obtain statistically valid information about the forage vegetation in BELA in order to 1) develop a reindeer grazing management plan, and 2) develop a long-term caribou habitat model that includes climate driven vegetation change.

The NPS has selected **Alternative B, Establish Grazing Enclosures** (the Preferred Alternative), to construct and monitor 18 enclosure fence sites, with mitigation measures.

Attachment A provides responses to substantive public comments. Attachment B is an Errata of changes to the EA. Attachment C is a non-impairment determination.

ALTERNATIVES

Two alternatives were evaluated in the EA.

Alternative A, No Action, the Environmentally Preferable Alternative

This alternative represents a continuation of the existing situation and provides a baseline for evaluating the changes and impacts of the proposed action.

Grazing enclosure fences would not be installed. The 78 existing winter range vegetation plots in BELA (measuring mostly treeless tundra lichen mats), that were installed by the NPS Arctic Inventory and Monitoring Network (ARCN) in 2004, would continue to be monitored, but they would not be paired with new ungulate enclosure plots. ARCN biologists would continue to visit and record vegetation changes at these 78 plots every 10-15 years. Under this alternative, no new data would be available on ungrazed vegetation in BELA.

Alternative B, Establish Grazing Enclosures, the NPS Preferred Alternative

The NPS will construct 18 new grazing enclosure fences in BELA. The enclosures will be placed in 6 different landcover types with 3 enclosures per type. Five of these landcover types have significant winter forage, and the sixth type is heavily grazed and will be monitored for vegetation recovery. Ungrazed vegetation plots within the enclosures will be paired with adjacent vegetation plot outside the enclosures.

Each enclosure will be a 30 ft x 30 ft x 6 ft high free-standing square fence with no stakes, sunken posts, or guy wires to hold them down. As such, they will not create ground disturbance and will rest upon the ground surface. Each enclosure will be constructed of 12 standard fencing panels (chain link fence attached to a 10 ft x 6 ft rectangle made of 2 inch galvanized steel pipe) clamped together in the field using hand tools. Reflectors will be placed on the enclosures to improve winter visibility for nighttime snowmachine safety.

Access to the enclosure sites for construction, maintenance, and monitoring will be by helicopter. There will be at least 2 initial helicopter trips to each site to deliver the materials. Helicopter, fuel and material staging will be outside of the Preserve, at the Quartz Creek (Kougarok) airstrip about 50 miles northeast of Nome. Eventual removal of the enclosures could be accomplished by snowmachine because the 10 ft x 6 ft fencing panels could be cut into small pieces.

Vegetation plots will be established so that two will be inside each enclosure and two will be outside and nearby in the same vegetation type.

The main study questions which the enclosures will be used to answer are:

1. How does the community structure of BELA's grazed vegetation compare with that of ungrazed vegetation after 30-50 years without grazing? Metrics include:
 - a. Lichen cover, height, biomass, and diversity
 - b. Vascular plant cover and diversity
2. How do BELA's long-term monitoring plots score on various metrics of grazing impact including estimated lichen biomass, disturbance class, and community structure? These metrics will be developed by using the endpoints of the grazing spectrum, from heavily impacted sites, and grazing enclosures.
3. What is the trajectory of vegetation recovery from heavy grazing with and without additional grazing? How many years will it take for vegetation to reach intermediate or late-successional status with regard to lichen biomass and community composition?

Every 10 years, the enclosures will be revisited and the co-located vegetation plots surveyed by NPS biologists to record vegetation data. In the deployment year (proposed for summer 2012), a baseline of conditions inside and outside the enclosures will be obtained. In successive 10-year visits, data will allow for several important analyses:

1. Comparison of vegetation structure inside versus outside the enclosures
2. Trends in recovery in the 3 heavily grazed sites
3. Description of the upper and lower bounds of vegetation condition for a variety of measures (e.g., abundance and diversity of lichen, and successional status)
4. Assessment of vegetation condition in BELA (from the vegetation plots outside the enclosures), based on the desired condition, which will be derived from the comparison of vegetation inside and outside of the enclosures.

PUBLIC INVOLVEMENT

Public scoping was conducted prior to the development of the EA. On June 3, 2011, a letter was issued requesting public scoping comments. It was posted on the NPS Planning, Environment

and Public Comment (PEPC) webpage. Public comments were accepted from June 3 through July 5, 2011. Five written scoping comments were received.

Information about this project was provided at public meetings with nearby villages from May-August 2011 by the Superintendent.

The EA was issued for public review and comment from February 7 to March 8, 2012. The EA, or notice of the EA availability, was sent by mail or email to about 180 addresses including government agencies, tribal entities, interest groups, and individuals. The EA was posted on PEPC and on the park's webpage. Six written comments were received. Commenters included the Bureau of Land Management, State of Alaska, Native Village of Kotzebue, two environmental organizations and one individual. Some commenters were supportive of the proposal and the long-term benefit of scientific monitoring to guide resource management decisions, and others were opposed to the project because they felt the benefits would not outweigh the impacts to eligible wilderness.

The public comments received did not change the conclusions in the EA about the environmental effects of the action. The NPS responses to substantive public comments are attached to this FONSI.

DECISION

The NPS decision is to select Alternative B, *Establish Grazing Exclosures*, along with mitigating measures.

Mitigating Measures

The following mitigation measures apply to the selected alternative, Alternative B, *Establish Grazing Exclosures*.

1. Cultural Resources – If previously unknown cultural resources are encountered, the work shall stop, the appropriate cultural resource personnel or the superintendent shall be notified, and assessments shall be made and action taken according to the Secretary of the Interior standards as set forth in NHPA Section 106.
2. Wildlife, Subsistence and Sport Hunting – To the extent possible, installation and maintenance activities shall be timed to avoid sensitive time periods, such as nesting season, times of caribou migration, and times of subsistence activities involving wildlife. Whenever feasible, helicopter flights shall maintain at least a 1,500 foot vertical and horizontal distance from big game animals, traditional summer habitats, calving grounds, and other habitats supporting wildlife reproduction. This shall include brown bear, moose, caribou, wolves and wolverines. Helicopters shall not hover over, circle, harass, or pursue wildlife in any way. Use of helicopters during sport hunting season in areas of known sport hunting shall be avoided.
3. Wildlife – Helicopter activity shall be scheduled to avoid nesting season and periods of sensitive bird migration in the project areas. Known seabird colony areas shall be avoided.
4. Soils and Archeology – The exclosures shall not be secured or affixed to the ground other than by their own weight. There shall be no ground disturbance other than pounding in up to

5 vegetation plot markers per site (18 sites total), (5 X 18) or 90 marker stakes total for the project.

5. Visitor Information – A signs shall be posted on each of the 18 exclosures briefly stating its purpose and an office to contact. The signs shall remain affixed to the exclosures for the duration of the 30-50 year project.
6. Natural Quiet – To reduce adverse noise impacts to wildlife and recreational users, helicopters shall maintain a minimum altitude of 2,000 feet above ground, other than during the initial phase of slinging the fencing material into the site, during landing and takeoff, or when visibility is limited by cloud cover, pursuant to Federal Aviation Administration (FAA) Advisory Circular (AC91-36C), “Visual Flight Rules (VFR) Near Noise Sensitive Areas.”
7. Safety – High visibility markers will be added to the exclosure fences to make them more visible for safety. This will improve hazard visibility for cross-country snowmachine travelers. This measure was added as a result of public comment.
8. Wilderness – If an exclosure is no longer used for vegetation monitoring, fails, collapses, becomes unusable, or becomes unsuitable for the purposes of the study, then it will be repaired or removed in a timely manner (by the next field season).

Rationale for the Decision

The selected action will satisfy the purpose and need of the project better than the *No Action* alternative. The exclosures will enable NPS to determine effects of the grazing on vegetation over the long-term. Vegetation monitoring will determine whether forage can support reindeer and wildlife (caribou) grazing, and whether observed changes are due to grazing or other effects. While the project will not distinguish between caribou and reindeer grazing, the exclosures will enable vegetation changes to be attributed to either grazing or other factors such as fire or climate change.

The results of these analyses will lead to several key benefits:

1. NPS will be able to develop better desired condition classes that optimize lichen biomass and diversity while still allowing for permitted grazing. These target classes will form the eventual basis of a reindeer management plan based on quantitative ecology.
2. NPS will have concrete data on the status of Western Arctic Caribou Herd winter range, leading to a better understanding of the causes of population declines. The current list of possible causes includes poor winter range condition, extreme weather events and icing, and an increase in predation.
3. NPS will be able to understand the potential role of grazing in mitigating the widespread shrub increase occurring throughout the arctic.

The project will take place in eligible wilderness and impacts to wilderness character will be moderate. Some of the *undeveloped* quality of wilderness will be impacted by multiple helicopter landings and the establishment of 18 installations, but these impacts will be balanced in the long term by the information gained which will result in the protection of the *natural* quality of wilderness character. Impacts on all other impact topics were determined to be minor.

The environmentally preferable alternative was the *No Action* alternative and was not selected because it would not satisfy the purpose and need of the project.

Significance Criteria

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

1. *Impacts that may be both beneficial and adverse.*

The adverse impacts to wilderness character were evaluated in a minimum requirements analysis attached to the EA, and these are now found to be balanced by the beneficial impacts (knowledge gained) of the project.

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

The project increases the safety risk for nighttime snow machine travel in the Preserve. To reduce this minor risk, reflectors will be placed on the exclosures.

3. *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.*

Establishment of the 18 exclosure fences in eligible wilderness could be viewed by some as a precedent for future approvals of research or management facilities in wilderness. The adverse effects on wilderness will be moderate. This project provides an opportunity to study important arctic plant communities and reindeer range, both of which were identified in the Preserve’s enabling legislation.

4. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

Establishment of the 18 exclosures fences will approximately double the number of management facilities in BELA’s eligible wilderness. This project would not raise the cumulative impacts of facilities in wilderness to the level of significance.

FINDINGS

The levels of adverse impacts to park resources from the selected alternative will not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or that are key to the natural or cultural integrity of the park.

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

The NPS 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

RESPONSES TO PUBLIC COMMENTS
for the
Bering Land Bridge National Preserve EA for
Grazing Enclosures

The NPS received 6 public comments: 1 from the Native Village of Kotzebue (a tribal government), 1 from the State, 1 from the BLM, 2 from conservation groups (NPCA and the Wilderness Society), and 1 from an unaffiliated private individual.

The NPS has read and considered all comments received. Responses to substantive comments are provided below. 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; or (4) make factual corrections (CEQ NEPA Regulations 1503.4).

Comment 1, *Native Village of Kotzebue (a tribal government)*: The Tribe recommend adding reflective flags for safety visibility.

Response 1, NPS: The NPS agrees and will put reflectors on the enclosures to make them more visible for snowmachine safety. See the Errata below.

Comment 2, *State of Alaska, ANILCA Implementation Program, Office of Project Management and Permitting*: The state requested clarification that subsistence access by “other means of surface transportation traditionally employed” includes ORV use as a traditional mode of access.

Response 2, NPS: Access for subsistence uses includes snowmachine, motorboat, and dog team, and other means of surface transportation traditionally used for subsistence. Although ORVs are used in and near villages adjacent to the Preserve and along the northwest coast, ORVs have not yet been shown to be traditional in BELA for subsistence uses. The NPS has clarified the EA statement in the errata below.

Comment 3, *State of Alaska, ANILCA Implementation Program, Office of Project Management and Permitting*: 36 CFR 13.702 allows the use of ORVs for reindeer grazing purposes in BELA. We request the errata sheet recognize that ORVs are allowed for reindeer grazing.

Response 3, NPS: In the EA, section 1.2.2, *Laws, Regulations and Policies*, references 36 CFR 13.702 regulation regarding permits for ORV use for reindeer grazing.

ATTACHMENT B

ERRATA for the Bering Land Bridge National Preserve EA for Grazing Exclosures

This errata provides clarifications, modifications or additional information to the EA and to the selected alternative, *Alternative B, Establish Grazing Exclosures*. These amendments 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. EA section 1.1, *Purpose of and Need for Action*, is expanded to include: The main study questions which the exclosures would be used to answer are:
 1. How would the community structure of BELA's grazed vegetation compare with that of ungrazed vegetation after 30-50 years without grazing? Metrics include:
 - a. Lichen cover, height, biomass, and diversity
 - b. Vascular plant cover and diversity
 2. How would BELA's long-term monitoring plots score on various metrics of grazing impact including estimated lichen biomass, disturbance class, and community structure? These metrics will be developed by using the endpoints of the grazing spectrum, from heavily impacted sites, and grazing exclosures.
 3. What would be the trajectory of vegetation recovery from heavy grazing with and without additional grazing? How many years would it take for vegetation to reach intermediate or late-successional status with regard to lichen biomass and community composition? **[Clarification]**
2. EA section 2.2.3 *Mitigation Measures* is changed to add: High visibility markers will be added to the exclosure fences in an effort to make them more visible for safety. **[Addition]**
3. EA section 2.3.1, *Proposed Action*, is changed to add: If an exclosure is no longer used for vegetation monitoring, fails, collapses, becomes unusable, or becomes unsuitable for the purposes of the study, then it will be repaired or removed in a timely manner (by the next field season). **[Addition]**
4. EA section 2.3.1, *Proposed Action*, is changed to add: Costs of regular vegetation monitoring, and for maintaining, repairing and removing the exclosures will be borne by ARCN. **[Addition]**
5. EA section 3.7, *Subsistence*, paragraph 3, is changed to read: At BELA, access for subsistence uses includes snowmachine, motorboat, and dog team, and other means of surface transportation traditionally used for subsistence. Although ORVs are used in and near villages adjacent to the Preserve and along the northwest coast, ORVs have not yet been shown to be traditional in BELA for subsistence uses (GMP, 1986). **[Clarification]**

ATTACHMENT C

NON-IMPAIRMENT DETERMINATION for the Bering Land Bridge National Preserve EA for Grazing Enclosures

The NPS Organic Act of 1916 prohibits impairment in its instruction “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.” A determination of non-impairment is made for each of the resource impact topics carried forward and analyzed in the EA for the selected alternative (*Alternative B, Establish Grazing Enclosures*, the NPS Preferred Alternative). The description of park significance in Chapter 1 was used as a basis for determining if a resource is:

1. *necessary* to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
2. *key* to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
3. *identified* in the park’s general management plan (GMP) or other relevant NPS planning documents as being of significance.

IMPACT TOPICS

Non-impairment determinations are not made for the impact topics *Subsistence* or *Safety* because they are not related to park resources and values that could be impaired under the NPS Organic Act.

Wildlife and Habitat

The quality of wildlife resources and habitat in the project area is excellent with abundant natural populations of caribou, moose, wolverine, wolf, muskox, fox, brown bear, lynx, and marmot, among others, and 108 species of birds. Wildlife resources are *necessary* to fulfill the purposes for which the Preserve was established. Wildlife resources are *key* to the natural integrity and opportunity for enjoyment of BELA. Wildlife resources are *identified as a significant* resource in the GMP. Domestic reindeer were introduced in the 1890s. Polar bear is listed as threatened but does not occur in the project area, and its critical habitat does not overlap the project area. No other federally listed or proposed, threatened or endangered species or critical habitat is present in the project area. Sport and subsistence hunting is allowed in the Preserve.

Alternative B will not result in impairment of the wildlife and habitat resources because the impacts would be minor. The geographic *context* of the project will include 18 separated locations in the 2.7 million acre Preserve with the enclosures covering a total of about 0.37 acres. The *severity* of impact to wildlife and habitat is minor because the enclosure fences would be set on top of the ground with no surface disturbance other than the 2” wide and 120’ long fence edge at each enclosure pressing on the tundra vegetation. The *duration* is very long-term at 30 to 50

years for the physical exclosure structures, but the duration of the disturbances from activities is small at each site – about 3 helicopter flights for the initial construction, then 1 visit by helicopter every 10 years to monitor the vegetation plots. Maintenance and repair may add additional activity at some of the sites. The *timing* of the short-term helicopter access and human activity impacts will be in summer when foraging, breeding and rearing young will be disturbed; however, to the extent possible, human activities will be timed to avoid sensitive time periods such as nesting season, times of caribou migration and times of subsistence activities involving wildlife. Whenever feasible, helicopter flights will maintain at least a 1,500 foot vertical and horizontal distance from big game animals, traditional summer habitats, calving grounds, and other habitats supporting wildlife reproduction. This will include brown bear, moose, caribou, wolves and wolverines. Helicopters will not hover over, circle, harass, or pursue wildlife in any way. Use of helicopters for the project during sport hunting season in areas of known sport hunting will be avoided. Helicopter activity will be scheduled to avoid nesting season and periods of sensitive bird migration in the project areas. Known seabird colony areas will be avoided.

Alternative B will involve the installation of 18 fence exclosures and helicopter access. By learning about grazing impacts to vegetation, the NPS will be able to make better decisions about reindeer grazing management, wildlife management, subsistence use, and predator control. The effects of Alternative B on wildlife and habitat will be minor, direct, and adverse from displacement of wildlife and disturbance during installation, monitoring and maintenance of the exclosures, but wildlife populations will remain viable, and the ecological integrity of wildlife habitat within the analysis area will remain intact. These effects will not result in impairment.

Vegetation and Soils

The condition of vegetation and soils in the project area is thought to be intermediate because it is in recovery from huge over grazing in the 1930s, though its status is uncertain because there are currently no ungrazed areas in most landcover types to serve as reference points. There are limited areas known to be over grazed, and 3 exclosures will be located there to address vegetation recovery. The enabling legislation of BELA identifies preservation of the geologic values associated with natural landscapes, lands, arctic plant communities, unaltered arctic tundra, and boreal forest ecosystems. Vegetation resources are *key* to the natural integrity of the Preserve. Vegetation resources are *identified as significant* resources in the 2009 Foundation Statement.

Alternative B will not result in impairment of the vegetation and soils resources because the impacts would be minor. The geographic *context* of the project will include 18 separated locations in the 2.7 million acre Preserve with the exclosures covering a total of about 0.37 acres. The *severity* of impact to vegetation and soils will be minor because the exclosure fences will be set on top of the ground with no surface disturbance other than the 2” wide and 120’ long fence edge at each site pressing on the tundra vegetation. The *duration* will be very long-term at 30 to 50 years for the physical exclosure structures, but the duration of disturbance due to human activities will be small – 1 visit to establish the exclosures and vegetation plots, then 1 visit by helicopter every 10 years to monitor the vegetation plots. Maintenance and repair may add some minor additional human activity trampling at some of the sites. The exclosures will not be

secured or affixed to the ground other than by their own weight. There will be no ground disturbance other than installing up to 5 vegetation plot markers per site (18 sites total), (5 X 18) or 90 marker stakes total for the project.

Alternative B will involve 0.37 acres of manipulation of vegetation by excluding large herbivores. By learning about grazing impacts to vegetation, the NPS will be able to make better decisions about reindeer grazing management and thus improve protection and management of vegetation resources. The enclosure data will help NPS managers distinguish between vegetation changes due to grazing and vegetation changes due to other causes such as fire, climate change, or invasive species. The effects of Alternative B on vegetation and soils will be minor local, direct, and adverse over the 30 to 50-year life of the project from vegetation trampling and soil compaction. These effects will not result in impairment.

Visual Quality

The condition of visual resource quality in the project area is generally excellent with almost no anthropogenic point sources of air pollution in the 2.7 million acre Preserve other than for transportation by air or snowmachine. Scenic quality is excellent with few trees, open tundra, long distance vistas, watchable wildlife, very little human disturbance, and almost no visual intrusions of built infrastructure. Scenic resources are *necessary* to fulfill the purposes for which BELA was established. “Unrivaled scenic values associated with natural landscapes” are *key* to the opportunity for enjoyment of the Preserve. Visual Quality is not specifically mentioned as a significant resource in the 1986 GMP.

Alternative B will not result in impairment of visual quality because the impacts would be minor. The geographic *context* of the project will include 18 separated locations in the 2.7 million acre Preserve. The *severity* of impact to visual quality will be the change from natural scenery to views with built infrastructure in 18 locations around BELA. The *duration* will be long-term at 30 to 50 years for the enclosure structures, but the duration of the visual intrusions from helicopter activities will be short-term – 3 flights in 1 day to establish the enclosures and vegetation plots, then 1 visit by helicopter every 10 years to monitor the vegetation plots. Inspection and repair may add some additional short-term visual intrusion from helicopter or snowmachine access to the sites.

Alternative B will involve the installation of 6-foot high fence enclosures and helicopter use. The effects of Alternative B on visual quality will be minor, long-term, direct, local, and adverse from enclosure fences visible at 18 sites in a large expanse of natural treeless tundra landscape, and from short-term, temporary, and adverse from helicopter access. These effects will not result in impairment.

Natural Soundscape

The condition of the natural soundscape resource in the project area is generally excellent with no artificial noises except for infrequent small airplanes or snowmachines. Natural soundscape resources are not specifically mentioned in BELA’s enabling legislation so it is not *necessary* to fulfill the purposes for which the unit was established. The legislation came closest when calling

for “preservation of wilderness resource values and related recreational opportunities.” Natural soundscape resources are not specifically mentioned as *key* to the opportunity for enjoyment of the Preserve or in the 1986 GMP.

Alternative B will not result in impairment of natural soundscapes because the impacts would be minor. The geographic *context* of the project will include 18 separated locations in the 2.7 million acre Preserve in an open mainly treeless environment. The *severity* of impact to natural soundscapes will depend on the distance from the observer to the helicopter activity. The *duration* of the project is long-term at 30 to 50 years, but the duration of the natural soundscape intrusions will be quite limited – about 3 helicopter flights for the initial construction, then 1 visit by helicopter every 10 years to monitor the vegetation plots. Maintenance and repair may add additional human activity at some of the sites. The *timing* of the short-term helicopter access impacts would be in summer. Use of helicopters during sport hunting season in areas of known sport hunting will be avoided. To reduce adverse noise impacts to wildlife and recreational users, helicopters will maintain a minimum altitude of 2,000 feet above ground, other than during the initial phase of sling-loading the fencing material to the sites, during landing and takeoff, or when visibility is limited by cloud cover, pursuant to Federal Aviation Administration (FAA) Advisory Circular (AC91-36C), “Visual Flight Rules (VFR) Near Noise Sensitive Areas.”

Alternative B will involve noise from dozens of helicopter flights for the installation of 18 fence enclosures. The effects of Alternative B on natural landscapes will be minor, temporary, direct, and adverse from noise intrusions by helicopters during installation, maintenance, and removal of enclosures, and monitoring of paired vegetation plots. These effects will not result in impairment.

Wilderness

The Preserve is not designated wilderness, but it is eligible wilderness. The quality of the wilderness character is excellent with 2.7 million acres of unroaded, undeveloped natural landscape with outstanding opportunities for solitude and a primitive and unconfined form or recreation. When BELA was established by ANILCA in 1980, congress chose not to include it in the National Wilderness Preservation System, so wilderness is not *necessary* to fulfill the purposes for which the Preserve was established. Wilderness is not *key* to the natural and cultural integrity of the Preserve, or to the opportunity for enjoyment of the Preserve. Wilderness is *identified as significant* in the 1986 GMP which included a wilderness suitability review. At that time, essentially all federal land in BELA was found to be suitable.

Alternative B will not result in impairment of the wilderness character because the impacts would be moderate. The geographic *context* of the project will include 18 separated locations in the 2.7 million acre Preserve with the enclosure fences covering a total of about 0.37 acres. Reindeer grazing is a “commercial enterprise” which is a prohibited activity under the 1964 Wilderness Act, Section 4(c), but the 1980 ANILCA, Section 201(2), specifically directs the NPS to “continue reindeer grazing use” in BELA, thereby overriding any earlier prohibition. The *severity* of impact to wilderness character from the project comes from prohibited “structures or installations” and “landing of aircraft” in wilderness, per the Wilderness Act, with

no legislative special provisions. The allowances for the installations and the helicopter landings come from the Wilderness Act, Section 4(c) – “except as necessary to meet minimum requirements for the administration of the area for the purpose of the Wilderness Act.” The exclosures are needed to monitor effects of grazing on vegetation and habitat quality and are considered necessary for managing the area given its existing mandate regarding reindeer grazing. While the project area is not designated wilderness, the NPS policy is to manage eligible wilderness as designated wilderness. The *duration* is long-term, at 30 to 50 years, for the exclosure structures’ impacts to wilderness. The duration is short-term for impacts to wilderness from the landing of aircraft at each site – about 3 helicopter flights for the initial construction, then 1 visit by helicopter every 10 years to monitor the vegetation plots. Maintenance and repair may add additional disturbance of wilderness character at some of the sites. The *timing* of the short-term helicopter access will be summer.

Impacts and benefits to wilderness character include the following. The project will impact the *untrammelled* quality of wilderness by controlling and manipulating 30’x30’ areas of land inside each of the 18 ungulate exclosures. The project will benefit the *natural* quality of wilderness by providing scientific information to improve grazing management to protect the wilderness ecological system. The project will impact the *undeveloped* quality of wilderness by adding 18 structures for grazing management for 30-50 years. The project will not affect the wilderness quality of *solitude*, except for the temporary impact during those hours when the crew sets up the exclosures or reads the vegetation plots. The project will not affect the wilderness quality of *unconfined recreation* in BELA.

The effects of Alternative B on wilderness character will be moderate, long-term, direct, adverse impacts from both the presence of the 18 exclosures and the dozens of helicopter landings for installation, maintenance, monitoring, and removal. These effects will not result in impairment.

SUMMARY

As described above, adverse impacts as a result of implementing the selected alternative, Alternative B (*Establish Grazing Exclosures*, the NPS Preferred Alternative and the Proposed Action) on a resource or value whose conservation is *necessary* to fulfill specific purposes identified in the establishing legislation, *key* to the natural or cultural integrity or to the opportunities for enjoyment of the Preserve, or *identified as significant* in the GMP or other relevant NPS planning documents, would not rise to levels that would constitute *impairment* under NPS Management Policies or the NPS Organic Act.

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