National Park Service
U.S. Department of the Interior

Katmai National Park and Preserve
Alaska

Finding of No Significant Impact

Brooks River Area Utilities Replacement and Housing Relocation

March 2010

Recommended: _____ 3/4/2010
Superintendent, Katmai National Park and Preserve — Date

Approved: _____ 3/11/2010
Regional Director, Alaska — Date

FINDING OF NO SIGNIFICANT IMPACT

Brooks River Area Utilities Replacement and Housing Relocation
Katmai National Park and Preserve, Alaska
February 2010

The National Park Service (NPS) prepared an environmental assessment (EA) to evaluate a proposal to construct replacement utility systems for Brooks Camp, at Katmai National Park and Preserve, Alaska (EA Figure 1). This project will facilitate this move of support facilities from Brooks Camp to the south side of the river through site planning and layout, utility installations, and employee housing relocation or replacement. The goal is to reduce administrative activity at Brooks Camp in order to protect natural and cultural resources, reduce the potential for bear/human encounters, and address failing utilities and infrastructure. The project site is adjacent to the recently constructed gravel pad for the new maintenance facility along the Valley of Ten Thousand Smokes Road (Valley Road), near its intersection with the road from Lake Brooks to the Lower Viewing Platform (EA Figure 2). The new area is referred to as the Valley Road Administrative Area (VRAA).

The NPS has reviewed Council on Environmental Quality, Department of Interior, and NPS environmental compliance regulations and guidelines and determined that the location of the new support facility is not a substantial change to the 1996 Brooks River Area Development Concept Plan (DCP) Environmental Impact Statement (EIS) and will not require a supplemental EIS.

This FONSI is for the implementation of a site plan at the VRAA. The site was approved in earlier NEPA documents – first in the 1996 DCP/EIS/ROD, and second in the 2007 Lake Brooks Maintenance Facility EA/FONSI. This FONSI does not change these earlier decisions or direction.

The NPS has selected Alternative 2, Single Loop (Proposed Action/Preferred Alternative), with mitigation measures.

Thirteen parties provided comments during the EA public review period. Substantive comments and errata to the EA are located in Attachment A of this FONSI.

ALTERNATIVES

Three alternatives were evaluated in the EA.

Alternative 1, No Action

Under Alternative 1, the NPS would continue to operate, administer, and maintain the existing facilities at the Brooks Camp area of Katmai. No facilities or utilities would be removed or constructed. Existing needs would not be addressed and would likely continue at the present level, or worsen over time as facilities age and degrade. This alternative represents a

continuation of the existing situation and provides a baseline for evaluating the changes and impacts of the action alternatives.

Alternative 2, Single Loop, the Selected Alternative

Under Alternative 2, employee housing will be located on a single loop road, which will be constructed adjacent to the recently constructed gravel pad for the new maintenance facility located near the intersection at the beginning of the Valley Road (EA Figure 3).

The site design combines two linear layouts that connect in a loop; the west side of the loop will contain service buildings, a community building, and housing for NPS employees, while the east side of the loop will contain building sites and service facilities for the Brooks Lodge concessioner. The design will provide physical and visual separation between the two, while allowing maintenance equipment to pass and utility loops to be created.

This layout incorporates long sweeping curves to enhance visibility for potential bear encounters. The loop maintains its role as an infrastructure corridor, minimizing the impact of development on the forest vegetation. The utilities (water, wastewater, power, heat) will run on a central spine; the building placement on each side of the path will allow branching of the utility lines.

Alternative 3, Double Loop, the Environmentally Preferred Alternative

Under Alternative 3, a housing area would be located on a double loop road, which would be adjacent to the recently constructed gravel pad for the new maintenance facility. Connecting road spurs would be constructed to the maintenance yard and Valley Road (EA Figure 4).

The site design focuses on consolidating the development and minimizing its footprint. The placement of buildings would follow the loops, with small access paths to the individual building sites. The design would provide physical and visual separation between the housing units, while allowing maintenance equipment to pass and utility loops to be created.

This layout considers curve design to enhance visibility for potential bear encounters. The loop maintains its role as an infrastructure corridor, minimizing the impact of development on the forest vegetation. The utilities (water, wastewater, power, heat) would run on a central spine; the building placement on each side of the path would allow branching of the utility lines.

PUBLIC INVOLVEMENT

The EA was issued for public review and comment from December 15, 2009 to January 15, 2010. The EA was sent by mail or email to 103 government agencies, tribal entities, interest groups and individuals. The EA was posted on the NPS Planning, Environment, and Public Comment (PEPC) website and on the park's website. Fourteen written comments were received from thirteen parties.

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 found in Attachment A.

DECISION

The NPS decision is to select Alternative 2, Single Loop, along with the mitigating measures.

A driveway will connect the head of the loop with the Valley Road. The gravel roadway will be approximately 1,800 feet long and 11 feet wide and consist of approximately 12 to 16 inches of compacted material over compacted subgrade with an approximate 4 inch cap of compacted D1 gravel. Finish elevations will be built up from the existing grade to provide positive drainage away from the improved areas. Structural fill will be used to construct these travel ways. Structural fill and backfill will be comprised of non-frost susceptible material. The existing gravel pit along the Valley Road will be used as a gravel source.

A utility corridor/foot trail will connect the maintenance facility and the new housing area (EA Figure 3). The footpath will be approximately 280 feet long and 8 feet wide and consist of approximately 12 inches of compacted material over compacted subgrade with an approximate 2 inch cap of crushed gravel.

The project site will be cleared of the existing trees and stripped of the organic materials only as required for the construction of the access road, housing units, and utilities. Approximately 6 acres will be cleared.

Under this alternative, maintenance facilities and employee housing identified in the modified Table 2-1 (see errata) will be replaced or relocated from Brooks Camp and Lake Brooks to the new VRAA. The placement of facilities at the VRAA will take place in a sequential process as funding and labor become available. This process will consider the operational needs of the park and the concessioner for the time period when facilities are divided between the north and south sides of the river. In addition to the replacement or relocation of existing facilities, new facilities will be added to the VRAA (EA Appendix B).

Vegetation clearing for building construction or relocation will occur in phases and only when a facility is ready to be sited. A 30-foot fire perimeter will be maintained around all structures.

Table 2-1 in the attached errata lists the facilities for the VRAA. EA Table 2-2 lists Brooks Camp maintenance and housing support facilities planned for removal or relocation.

NPS will determine when individual structures are to be relocated or replaced, working in cooperation with the park concessioner to assure minimal disruption on operations and visitor services. Relocated structures will be moved over the existing Brooks Camp road and trail system to the Naknek lakeshore. From there the structures will be transported over the lake to the south side of the river and hauled over the existing Valley Road to the VRAA. Transport operations will occur either when the lake is frozen during the winter months or when lake water

levels are high enough to support barge operations in the summer and early fall months. Any structure determined not suitable for relocation will have its function replaced with a suitable structure at the VRAA followed by the eventual removal of the existing structure from Brooks Camp. The NPS goal remains to relocate and remove structures from the north side of the river.

The selected alternative includes installation of several utility components: water, wastewater, power, heat, fuel, and fire suppression.

Water

A new water storage and distribution system will be provided to serve the support facilities to be relocated from the existing Brooks Camp to the VRAA on the south side of the river. This system will originate at a well near the maintenance yard (presently under construction). Water from the well will require chlorine treatment. Water distribution systems will be composed of high density polyethylene pipe material. Storage sufficient for potable water will be provided. The system will be designed to accommodate winterization, including shallow bury with drain points, sloping of pipes for drainage, valving to facilitate shut offs, and heating systems to prevent late season freezing.

The initial construction will install the water mainline distribution piping with stub-outs to future structures. This project will install blue posts to locate the end of the water service stubs.

Wastewater

A new wastewater collection system will be provided with septic tank(s) and soil absorption system (leach field) to support facilities at the VRAA. The wastewater pipe material will be high density polyethylene. The approximate size of the primary and alternative soil absorption system will be 0.4 acres.

Each structure supplied with water service will be equipped with at least a 4 inch sewer service. These sewer service lines will lead to at least a 6 inch main collection pipe that will outfall to the new onsite septic tank and soil absorption system.

The initial construction will install the sewer mainline collection piping with stub-outs to future structures. Green posts will be installed to locate the end of the sewer service stubs.

Power

New power generation and a new electrical distribution system will serve Brooks Camp, Lake Brooks, and the VRAA. Two 35 kilowatt (kW) diesel powered generators, as well as bulk diesel and gasoline storage, will be relocated from their present location at Lake Brooks to the new maintenance facility. The generators will be installed in weatherproof and soundproof enclosures, in close proximity to the heating plant and maintenance facility. As the phased build out at the new housing area proceeds, the power generation capacity will need to be expanded to meet the increased demands.

The NPS intends to provide 120/208 volt electrical distribution system to facilities in the new housing area to minimize the number of transformers required.

A high voltage electrical line will eventually provide power to Brooks Camp. The line will be placed in a 3 inch conduit and buried to a depth of 24 inches in the Valley Road and the road to Brooks Camp. The line will begin at the maintenance facility and terminate at the bus parking area (EA Figure 2). About 500 feet from the parking area, the line will be installed in steel conduit buried to a depth of about 6 inches on the north side of the road to avoid affecting archeological resources. Pull boxes will be installed about every 300 feet along the new buried roadside electric line.

At Brooks Camp, a new high voltage electrical distribution line will be installed between the utility building and the lodge office or the fish cleaning building. The line will be buried in 4 inch conduit adjacent to an existing line.

These lines will eventually be connected. The type of river crossing for the utility lines (overhead lines, buried in river bottom, or hung from bridge) will be decided in the decision document for the Brooks River Visitor Access Improvements EIS.

Whenever feasible, alternative energy sources, including solar and wind, will be used to replace or augment power generated from fossil fuels.

Heat

A central boiler plant will be constructed to circulate a propylene glycol and water solution through a single main distribution loop heating system to virtually all of the facilities proposed to be constructed at or relocated to the new VRAA. The boilers could also be utilized to generate hot water for showers, lavatories, and sinks.

Fuel

Diesel will be used for heating and power generation. Two above ground tanks will be installed to provide storage of diesel to fuel the onsite generator that will supply power for the facilities. The new tanks will be dual wall self-diked welded steel construction with a capacity of 8,000 gallons each (16,000 gallons total). The new 8,000 gallon diesel fuel tanks will replace the existing 4,000 gallon diesel fuel tank relocated from Lake Brooks to the maintenance yard. This increase in diesel fuel capacity will provide generated power to the entire VRAA and Brooks Camp and fuel for vehicles and equipment.

Fire Suppression

A mist system will be installed for fire suppression to protect the new structures. The purpose of clearing around housing units is to create defensible space around structures to comply with fire code regulations.

MITIGATING MEASURES

The following mitigation measures apply to the selected alternative, Single Loop.

Cultural Resources

A 5 meter buffer with no surface disturbance will surround the known archeological site near the proposed entrance road to the VRAA.

Buried utility lines near known archeological sites will be in pipe along the north side of the road and in trenches no deeper than the 1912 Katmai Ash (cultural remains are below Katmai Ash).

Archeological monitoring will occur during surface disturbances for utility trenches in the VRAA and near the known archeological sites along the road.

If proposed excavation locations cannot be adjusted to avoid adversely affecting eligible cultural resources, then the NPS will execute a Memorandum of Agreement with the Advisory Council on Historic Preservation and the Alaska State Historic Preservation Office (SHPO), incorporating comments from consulting parties, including local tribes. The Memorandum of Agreement will specify measures to minimize or mitigate adverse effects.

Should previously unknown cultural resources be identified during project implementation, work will be stopped in the discovery area. The NPS will perform consultations in accordance with 36 CFR 800.11. The resources will be evaluated to determine if they are eligible to be listed on the National Register of Historic Places (NRHP).

Any artifacts recovered from park property at the project site will be accessioned, cataloged, preserved, and stored in compliance with the NPS Cultural Management Guidelines.

Visitor Experience

Visitors will be made aware of proposed construction activities in advance via the park website, park ranger contacts, bulletin board postings, and other communication methods.

Use of the Naknek Lake barge landing will be limited to the minimum time needed to load/offload and transport equipment and materials. No equipment, materials, or vehicles will be left unattended on the Brooks River “spit” barge landing and access road, Valley Road, or the access road between Brooks River and Lake Brooks.

The installation of the underground electric utility line between the VRAA and the bus parking area will occur before Brooks Camp is open to the public or during traditionally low visitation levels.

Wildlife and Wildlife Habitat

The transport of equipment, supplies, and project personnel from Lake Camp to the VRAA will be coordinated with the NPS to minimize human-bear interactions, including compliance with the 50 yard approach distance regulation.

Appropriate measures will be taken at the project site and construction crew camp site to ensure equipment, supplies, fuel, food, and trash are properly stored away from bears. This will be accomplished through the use of bear resistant containers and buildings, and the installation of electrified perimeter fencing around the crew camp and project area.

To avoid the possibility of bears becoming food-conditioned, the NPS will implement solid waste management and fish transport and cleaning procedures for the construction and management of the VRAA. For example, food waste could be contained inside bear-resistant structures and waste containers, leach fields could be enclosed by bear fence, and existing fish transport and cleaning procedures could be employed at new sites.

In accordance with the USFWS guidelines to protect nesting migratory birds, there will be no tree cutting from April 10th to July 15th. If Steller's eiders are observed within the project area, proper USFWS protocol will be followed. If species of special concern identified by the State of Alaska and/or by the USFWS are observed within the project area, the USFWS and/or Alaska Department of Fish and Game will be notified, as appropriate.

Contractors will be provided bear behavior and biology training to lessen the chance of bear-human conflicts and reinforce resource management policies.

Vegetation and Soils

To minimize potential for introduction of invasive plants, any offsite equipment or materials will be inspected and cleaned prior to their movement to the project site.

Gravel used during the construction of the housing area will originate at the existing NPS gravel pit located approximately 4.5 miles southeast of the VRAA on the Valley Road.

Where feasible, topsoil will be conserved for redistribution post-construction; native plant seeds will be collected from the Brooks River area for sowing; and a nursery area will be created on site for temporary storage of vegetation removed from disturbed areas to be replanted following construction.

Natural Sound

Onsite machinery will meet manufacturer specifications for noise emissions. Any machinery imported to the site will be with current technology to help mitigate noise emissions.

RATIONALE FOR THE DECISION

Alternative 2, Single Loop, will satisfy the purpose and need of the project better than Alternative 3, Double Loop (environmentally preferred alternative) because the single loop design will provide better separation of housing units and common buildings, better facilitate pedestrian and vehicular circulation, simplify utility installations, and provide better access for fire protection and security.

Alternative 1, No Action, was rejected because it would not accomplish one of the goals of the 1996 Brooks River Area Development Concept Plan (DCP) to relocate facilities and infrastructure to the south side of the Brooks River. The selected alternative protects natural and cultural resources, improves visitor safety by reducing the potential for bear/human encounters, and addresses health and safety issues associated with failing utilities and infrastructure.

SIGNIFICANCE CRITERIA

The selected 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.
The EA evaluated the effects of the selected alternative (single loop) on cultural resources, natural sound, soils and vegetation, visitor experience, water resources, and wildlife habitat. These resources will be both beneficially and adversely impacted by the selected alternative. Impacts range from moderate negative to minor positive with no significant effects as described in the EA.

(2) The degree to which the proposed action affects public health or safety.
The proposed action will not affect public health or safety.

(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.
Brooks Camp and the VRAA project area are located within the Brooks River Archeological District National Historic Landmark. The earliest NPS buildings at Katmai National Park and Preserve are the ranger station (now visitor center) and boat house (now ranger station). Recently the Alaska SHPO concurred with the NPS determination that these structures are eligible to the National Register of Historic Places. Many buildings at Brooks Camp have just reached or will soon reach 50 years of age.

Although the selected alternative will not have an effect on prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas, it will permanently affect approximately six acres of previously undisturbed park lands on the south side of the Brooks River.

(4) The degree to which effects on the quality of the human environment are likely to be highly controversial.
Based on the number and content of comments received on the EA during the 30 day public comment period, the selected action is not considered highly controversial. The comments did not include suggestions for new alternatives that were not analyzed or considered in previous approved NEPA documents. The comments did not question the environmental analysis except in ways that are addressed in the attached errata.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
The selected action is not likely to have highly uncertain effects on the human environment. Extensive studies on the Brooks River area's human environment have provided the NPS ample information for the environmental impact analysis process.

(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.
The possibility that the selected action may establish a precedent of future actions with significant effects or represents a decision in principle about future considerations is unlikely. The location of the housing and maintenance areas were identified conceptually in the 1996 Brooks River Area Development Concept Plan (DCP), and more specifically in the 2007 Lake Brooks Maintenance Facility EA/FONSI. The selected action is consistent with the goals and objectives of these earlier plans. The location of the VRAA will not change the primary objective to protect sensitive park resources.

(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 cumulative case of the selected action along with the past, present, and reasonably foreseeable actions in the area were analyzed in the EA. Development of the VRAA includes the relocation of Lake Brooks maintenance facilities and the construction of two duplexes to replace existing Brooks Camp NPS employee tent frames. NPS is considering the replacement of the floating bridge with an elevated bridge and boardwalk system, and relocating the existing barge landing and access road away from the mouth of the river. Both of these proposed projects would help accomplish the phased relocation to the south side of the river as approved in the 1996 DCP.

(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.
See *(3)* above for additional information regarding effects on the Brooks River Archeological District and Brooks Camp Historic District.

(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 action will not adversely affect an endangered or threatened species or its habitat. A Steller's eider, a federally threatened species, was previously observed on one occasion along Lake Camp Road at the western end of Katmai National Park and Preserve, approximately 35 miles west of Brooks Camp. If Steller's eiders are observed within the project areas, United States Fish and Wildlife Service standard guidelines will be followed.

(10) Whether the action threatens a violation of Federal, State, or local laws or requirements imposed for the protection of the environment.
The selected alternative will not violate Federal, State, or local laws or requirements imposed for the protection of the environment. The Alaska Coastal Management Program concurred with the NPS negative determination that the selected alternative will not adversely affect coastal resources. The Alaska SHPO has concurred with the NPS that the selected alternative will not have an adverse affect on cultural/historic resources within the Brooks Camp area. The VRAA's domestic wastewater disposal and drinking water system will meet or exceed Alaska Department of Environmental Conservation (DEC) standards and construction activities will follow DEC regulations.

FINDINGS

The levels of adverse impacts to park resources anticipated 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 the Endangered Species Act, National Historic Preservation Act, Coastal Zone Management Act, and Alaska National Interest Lands Conservation Act (ANILCA). There will be no restriction of subsistence activities as documented by the ANILCA, 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
Brooks River Area Utilities Replacement and Housing Relocation
Environmental Assessment

This attachment amends the subject environmental assessment (EA) and provides NPS responses to public comments.

PUBLIC COMMENTS

The NPS received fourteen public comments: ten from private individuals (PI), one from a local business, one from the State of Alaska ANILCA Implementation Program, and two from nonprofit organizations (National Parks Conservation Association and the Sierra Club).

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, PI: The VRAA area is quite close to the road and the falls trailhead. These roads, in addition to the wildlife trails in the surrounding forest, compromise an area highly traveled by wildlife as it leads to the Brooks Falls and river corridor. Development in this area will not only impact the wildlife by the destruction of trails, but also by increased human presence in this area, which may perhaps have further impacts on non-habituated bears using this area.
Response 1, NPS: The park wildlife biologist conducted a site investigation and mapped evidence of bear use within the VRAA project site during the summer of 2009. One heavily worn bear trail passes through most of the VRAA in a general north-south direction. Nine bear digging areas and zero bear bed areas were observed within and immediately adjacent to the VRAA selected alternative (single loop) [Olson 2009]. Approximately 4 undisturbed acres of suitable habitat are present between the VRAA and the Valley Road, and approximately 14 undisturbed acres of suitable habitat are present between the VRAA and Lake Brooks. The presence of the VRAA will have a short-term negative minor to moderate impact on bear behavior. This is based on how bears reacted to past Brooks River area developments (e.g., construction of elevated boardwalks). Overall, there will be a minor to moderate long-term impact on bear behavior, habitat, and travel corridors depending on season of year, as stated in the EA.

Comment 2, PI: The EA suggests that the impacts to visitors and wildlife will be temporary and limited. This may be true for the reasons listed in the EA, but the EA fails to address that under alternatives 2 and 3 up to 120 visitors will be left alone on the north side of the river after normal work hours. Considering the exceptionally high seasonal bear concentrations along Brooks

River, does the park not consider this to be a potential impact to both wildlife and the visitor experience? How does the park plan to quickly respond to bear management and emergency situations without staff on the north side of the river, especially if the proposed elevated bridge across Brooks River is not built?
Response 2, NPS: Essential park and concession staff will continue to reside on the north side of the river to meet operational and safety needs during the transition period. Overnight visitors (up to 60 at lodge and up to 60 at the campground) will continue to be advised of bear/human safety concerns. The NPS and concessioner will coordinate to determine which staff remain on the north side of the river to meet day-use and overnight visitation needs.

Comment 3A, PI: [Bear] displacement may not only be locational in nature but also temporal, as there will be more late evening and early morning bear-human interactions with staff being required to cross the river in order to work.
Comment 3B, PI: Separating support housing from the main camp will result in increased human-bear interactions on the road and lower river due to increased employee traffic between the proposed VTTS housing and Brooks Camp (including increased human traffic during late-night and early-morning hours when there is currently little human use).
Response 3, NPS: During the housing relocation transition period the increase in staff pedestrian and vehicular traffic between the VRAA and Brooks Camp could have a negative effect on bear behavior during the early morning and late evening. The number of human-bear interactions during this time period will also likely increase. However, the NPS and concessioner will coordinate and make any necessary operational changes to reduce the likelihood of human-bear interactions. The selected alternative (Alternative 2, Single Loop) cumulative impacts analysis for wildlife habitat (Section 4.2.6, page 46) have been updated. See the Errata section for additional information.

Comment 4A, PI: In addition to employing proper equipment and food storage procedures, construction crew members should be provided with bear behavior and biology training to lessen the chance of bear-human conflicts and establish the priorities of development at Katmai National Park. Resource protection concerns should be paramount to construction timelines.
Comment 4B, PI: There need to be more explicit mitigation measures identified, to include specific staffing of bear management personnel whenever project related work is ongoing; specific requirements regarding access to the lower river when bear activity is high (and those time periods need to be specifically defined); specific requirements regarding secure storage of staged supplies, etc.
Response 4, NPS: General wildlife mitigations measures related to reducing negative effects on bear behavior and habitat during equipment transport and construction activities have been described above and in the EA. These existing mitigation measures are strong enough to guide operational changes during construction. The NPS may develop more specific mitigation measures and requirements to avoid or minimize environmental impacts.

Comment 5, PI: On p. 30, the EA states that "A fault line (Bruin Bay Fault) bisects the river approximately half way down its length, creating the Brooks Falls, a major visitor attraction for salmon and bear viewing." This statement is incorrect – the Bruin Bay Fault does not bisect the Brooks River, as illustrated on the geologic map included in Riehle's "*The Geology of Katmai*."

Response 5, NPS: The NPS agrees with the error and has modified the statement. See Errata section below.

Comment 6, PI: On p. 4, the EA states that Katmai is approximately 4.7 million acres, but on p. 40 the EA refers to the park as 4.3 million acres.
Response 6, NPS: Both numbers are inaccurate. As of September 30, 2009, Katmai National Park and Preserve encompasses 4.09 million acres of federal and non-federal lands, of which 4.02 million acres are managed by the NPS (NPS Land Resource Division, Washington D.C.). This correction has been made in the Errata section.

Comment 7, PI: On p. 10, in the section on Climate Change the EA states, "The proposed project would be expected to assist the NPS to reduce the consumption of energy and nonrenewable fuels in the long term, via more efficient operations. Thus, the proposed project would not be expected to contribute to climate change." This is incorrect. Simply moving diesel generators from one spot to another does not eliminate the park's contribution to greenhouse gases.
Response 7, NPS: The NPS has modified the statement to emphasize the selected alternative will have a negligible contribution to climate change.

Comment 8A, PI: If the park is serious about sustainable development then, at minimum, the new facilities should be planned and built to accommodate future development of rooftop solar and on-site wind power.
Comment 8B, PI: Consider passive and perhaps active solar design in any new facilities at Brooks Camp.
Response 8, NPS: The NPS is committed to reducing the amount of fossil fuel consumption for electrical generation and vehicle use at Brooks Camp as the VRAA is developed. Currently, funding is only available for the installation of utilities and replacement of seasonal tent frame units with new cabins. As additional funding becomes available for the construction of new housing units and other structures, the NPS will consider incorporating clean alternative energy sources such as roof top solar and other sustainable design standards currently used in other areas of Alaska.

Comment 9, PI: No quantitative analysis is presented of projected leach field lifespan with and without relocating employee housing (or of lifespan relative to other potential management actions such as implementing visitor use limits and reestablishing an earlier fall camp closing date).
Response 9, NPS: The existing Brooks Camp leach field is expected to remain operational for a period of 10 to 20 years based on design specifications and current staff and visitation use. Calculations were based on the existing Brooks Camp operational period. As housing units and other structures linked to the leach field system are removed from Brooks Camp, it is expected that the operational efficiency of the leach field can be extended.

Comment 10, State of Alaska: The EA does not mention effects resulting from decommissioning and possibly removing existing Brooks Camp facilities on the north side of the Brooks River. Some of these buildings and structures are contributing properties to the Brooks River Camp Historic District, which represents the Service's first established permanent presence

in Katmai National Monument in the 1950s. We encourage the Service's cultural resource staff to work with the State Historic Preservation Office (SHPO) to develop ways to avoid, minimize, or mitigate adverse affects to the Brooks Camp Historic District.
Response 10, NPS: When detailed plans are developed to move buildings and infrastructure from Brooks Camp, potential adverse effects related to the undertaking will be considered, assessed, and presented as a Determination of Effects to the SHPO.

Comment 11, PI: What is the proposed cost of implementing the NPS preferred alternative?
Response 11, NPS: The approximate project cost for the selected alternative is $6M to $7M.

ERRATA

This errata section provides clarifications, modifications or additional information to the EA and to the selected alternative, Alternative 2, Single Loop. 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."

To avoid confusion regarding use of the word "relocation" as used in the EA title and within various sections of the EA, the word has been defined based on its context to the Brooks Camp and VRAA and how it is applied to each individual structure. *"Relocation" refers to relocating the "function" of the structure. This may be achieved either by physically moving the structure or by constructing a replacement structure if the existing one is unsuitable to be physically moved. As employee housing (NPS and concessioner) becomes available on the south side (either constructed or moved there), structures on the north side will be removed.*

The size of Katmai National Park and Preserve has been incorrectly listed as 4.7 million acres in Section 1.2 and 4.3 million acres in Section 4.2.3. The correct acreage is 4.09 million acres (Federal and non-Federal lands) as of September 30, 2009 (NPS Land Resource Division, Washington D.C.).

The last statement about climate change in Section 1.6.2 has been clarified to the following: *"Although the NPS will continue to consume diesel fuel for electrical generation, the project's contribution to climate change will be negligible. Energy efficiencies from upgraded structures, insulation, and heating systems will result in a reduced carbon footprint."*

A statement has been added to Alternative 1 (No Action) description to clarify that rehabilitation of existing structures at Brooks Camp would continue. The complete paragraph in Section 2.1 follows: *"Under Alternative 1, the NPS would continue to operate, administer, and maintain the existing facilities at the Brooks Camp area of Katmai. Existing facilities would remain in place and rehabilitated, if needed. No new structures would be constructed. Existing needs would not be addressed and would likely continue at the present level, or worsen over time as facilities age and degrade. Cultural and natural resources would continue to be threatened. This alternative represents a continuation of the existing situation and provides a baseline for evaluating the changes and impacts of the action alternatives."*

The statements in Section 2.2 (page 14) and Section 2.3 (page 20) were modified to reflect consultation between the NPS and concessioner for the planned relocation of facilities from Brooks Camp to the VRAA. *"Under this alternative, maintenance facilities and employee housing identified in Table 2-1 would be replaced or relocated from Brooks Camp and Lake Brooks to the new VRAA. The relocation would take place as a sequential process when funding and labor are available. Direct consultation with the park concessioner would occur prior to the actual relocation or replacement of Brooks Camp housing and building structures. This process would consider the operational needs of the park and the concessioner for the time period when facilities are divided between the north and south sides of the river. In addition to the replacement or relocation of existing facilities, new facilities would be added to the VRAA (Appendix B)."*

The first statement on page 16 of Section 2.2 has been modified to reflect the concessioner's participation in the relocation process: *"The NPS through direct consultation with the concessioner would determine when individual structures are to be relocated or replaced."*

The following note is added to the EA Figure 3 – Alternative 2 (Single Loop) Preferred Alternative: *"Note: Housing footprints are conceptual in nature. The specific location of housing units will be determined in the future through detailed site design and planning."*

The incorrect statement regarding the location of the Bruin Bay Fault in relation to Brooks Falls has been removed from Section 3.8, Water Resources.

The cumulative impacts analysis on wildlife and wildlife habitat has been updated to include effects of increased pedestrian and vehicular traffic between the VRAA and Brooks Camp. The updated section follows: *"Past, present, and reasonably foreseeable future actions that have had and will continue to have impacts to wildlife in the area are described under Alternative 1. The implementation of Alternative 2 or Alternative 3 would disturb slightly more than 6 acres of wildlife habitat. During the transition period, increased NPS and concessioner pedestrian and vehicular traffic between the VRAA and Brooks Camp would continue to have a negative minor effect on bear behavior during the early morning and late evening hours of the season when normal visitation use of the access road to access the falls and riffles bear viewing platforms is less likely to occur."*

9. Table 2.1 has been modified to accurately depict the number of NPS and concessioner housing units planned for relocation or replacement and provide additional relocation versus replacement options. The number of NPS and concession staff will not increase from current numbers per the 1996 DCP.

Revised Table 2-1. Proposed Facilities for Valley Road Administrative Area

Facility	Maximum Occupancy	Description
Three NPS employee housing units	12	Replace five existing NPS employee Brooks Camp wall tents and relocate or replace* one cabin.
Four NPS employee housing units	12	Relocate or replace* four NPS Brooks Camp cabins.
Three NPS employee housing units	10	Relocate or replace* three NPS employee Lake Brooks cabins. Existing historic Lake Brooks fisheries cabin will remain in place.
NPS employee Bunkhouse	10	Replace NPS employee Brooks Camp transient housing (yurt).
Community building	0	Replace existing Brooks Camp employee community room and laundry room.
Trash storage	N/A	New construction provides a central location to store trash before removal or incineration.
Incinerator	N/A	New construction to incinerate solid waste (trash) at VRAA.
Resources lab	0	New construction provides NPS the ability to base research and resources management activities within the Brooks River area of Katmai.
Concessioner housing units**	26	Relocate or replace* existing cabins.
Concessioner community building	0	Community building for concession staff.
Soil absorption system (leach field)	N/A	New construction to provide sewage treatment for VRAA.
Vault toilet	N/A	New construction to provide sewage storage during shoulder seasons (spring and fall) when water and power are not available. Potentially the facility will be converted to a flush toilet during the summer.

This table depicts current NPS and concession employee numbers. During the transition period, overnight occupancy numbers for the north and south sides of the Brooks River combined will not exceed the following designated totals:

44 NPS employees at Brooks Camp and Lake Brooks (32 seasonal employees plus 12 transient employees)
26 concession employees at Brooks Camp

* Relocation or replacement will depend on existing cabin condition and ability to move each cabin from Brooks Camp or Lake Brooks to the VRAA.

** While the Brooks Lodge is on the north side of the river, it is necessary due to operational requirements, for a core number of concession employees to remain housed near the main Lodge facilities.