

**National Park Service**  
**U.S. Department of the Interior**

**Katmai National Park and Preserve**  
**Alaska**



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**Finding of No Significant Impact**

**Brooks Camp Fuel-Contaminated Sand Remediation**  
**Katmai National Park and Preserve**

**March, 2009**

Recommended: *Ralph Moore* 3/20/09  
Superintendent Date  
Katmai National Park and Preserve

Approved: *Sue G. Mason* 3/23/09  
Regional Director, Alaska Date

## **FINDING OF NO SIGNIFICANT IMPACT**

### **Brooks Camp Fuel-Contaminated Sand Remediation Katmai National Park and Preserve February 2009**

The National Park Service (NPS) is proposing to remove and remediate fuel-contaminated sand along the shoreline of Naknek Lake within Katmai National Park and Preserve (KATM) during the spring of 2009. The fuel-contaminated sand was discovered in 2007 during the approved excavation of sand for the construction of the new Brooks Camp leach field. Contamination of the lakeshore most likely occurred between 1975 and 1993 due to inadequate fueling practices and deteriorating underground fuel tanks and lines. These tanks and lines were subsequently removed in 1993 and replaced with a modern above ground fueling system. Removal of the contaminated sediments is needed to meet the requirements of federal, state, and local environmental protection laws, regulations, and policies, and to ensure the natural resources, processes, systems, and values of KATM are preserved and protected.

The NPS has selected Alternative B (NPS Preferred Alternative) with mitigating measures. Under this alternative, the NPS will excavate approximately 40 cubic yards of fuel-contaminated sand from the Naknek lakeshore adjacent to Brooks Camp using a small wheeled and/or tracked excavator. The contaminated sand will be transported to the Brooks Camp leach field area by dump truck and placed in a plastic lined soil cell where it will be treated with an Alaska Department of Environmental Conservation (ADEC) approved chemical oxidation solution. Contamination levels will be monitored using routine field and laboratory testing. Sand meeting ADEC minimum contaminant concentration levels will either be reused or placed in an approved disposal site located within KATM.

No comments were received on the Environmental Assessment (EA) during the 30-day public comment period.

#### **ALTERNATIVES**

Two alternatives were evaluated in the EA.

##### **Alternative A – No Action**

Under the No-Action Alternative, contaminated sand located on the Naknek shoreline adjacent to Brooks Camp will not be removed and remediated. Contaminated sand will remain in place and will not be disturbed.

##### **Alternative B – Remove Contaminated Sand from Naknek Lake Shoreline and Remediate within the Brooks Camp Area of KATM (NPS and Environmentally Preferred Alternative)**

Under the Proposed Action, sand within an estimated 50 ft by 50 ft area on the Naknek lakeshore will be removed by using a wheeled and/or tracked excavator. Several equally spaced 3-foot deep trenches will be excavated parallel to the shoreline. An environmental consultant will field test the excavated sand using a photoionization detector (PID) and a hydrocarbon test kit. Only contaminated “hot spots” will be removed from the lakeshore and remediated. It is estimated that up to 40 cubic yards of sand may require remediation.

Contaminated sand requiring ADEC cleanup level conditions will be transported by a dump truck approximately 400 feet to a soil remediation cell constructed within the Brooks Camp leach field. Sand

samples will be collected and transported to an ADEC certified laboratory for polycyclic aromatic hydrocarbon (PAH); diesel range organics (DRO); and benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations analysis. Sand not meeting ADEC cleanup conditions will be returned to the excavated area. The lakeshore will be leveled and re-graded as close as possible to its pre-excavated condition.

The soil remediation cell will be approximately 40 ft by 40 ft in size and will consist of a heavy-duty 20 mil or greater plastic impervious liner surrounded by a timber or elevated soil berm. The soil cell will be located a minimum of 200 feet away from drinking water wells. To reduce fuel-contaminant concentrations, a NPS and ADEC approved chemical oxidation solution will be applied and mixed at a rate of 20 pounds of solution per 1 cubic yard of contaminated sand. The solution is commonly used throughout the United States to safely remediate highly concentrated contaminated sites. The solution consists of two parts, an oxidizer and an activator, which are mixed together at the remediation site. The solution destroys the contaminants at the molecular level through chemical oxidation. The by-products of the chemical reaction are carbon dioxide and water.

A reinforced impervious polyethylene cover will be placed over the cell to mitigate possible human and wildlife exposure. An electrified fence will be installed around the soil cell to prevent brown bears and other wildlife from coming into contact with the contaminants and chemical oxidation solution. Contamination levels will be monitored using routine field and laboratory testing. Sand meeting ADEC minimum contaminant concentration levels will either be reused or placed in an approved disposal site located within KATM. The length of time required for the sand to be remediated in the soil cell is uncertain and will depend on the level of contamination.

## **PUBLIC INVOLVEMENT**

The EA was issued for public review and comment from January 22 to February 20, 2009. A press release announcing the EA availability was issued to various media outlets. The EA was sent by mail or email to 36 agencies, organizations, and individuals and was posted on the NPS Planning, Environment, and Public Comment website (<http://parkplanning.nps.gov>).

No comments were received during the 30-day public comment period.

## **DECISION**

The NPS decision is to select Alternative B (Remove Contaminated Sand from Naknek Lake Shoreline and Remediate within the Brooks Camp Area of KATM) with mitigating measures.

## **MITIGATING MEASURES**

Employee and Visitor Safety. All excavation and remediation activities will be conducted by NPS staff and contractors in a safe manner. Excavation and transport equipment will be operated only by qualified personnel. Contaminated sand will be excavated, contained, transported, treated, and disposed safely under applicable federal, state, and local laws, regulations, and policies. Contaminated sand will be stored and secured away from visitor areas.

Threatened, Endangered, and Species of Special Concern. Sand excavation activities will not take place if Steller's eiders (*Polysticta stelleri*) are present within the project areas. Contaminated sand storage and/or soil cell remediation activities will not occur within active olive-sided flycatcher (*Contopus borealis*), blackpoll warbler (*Dendroica straita*), or gray-cheeked thrush (*Catharus minimus*) nesting sites.

Water Quality. To protect the surface water and groundwater quality within and adjacent to the soil remediation area, excavation activities will occur while the Naknek lakeshore is dewatered during April and/or early May of 2009. The remediation cell will be lined with an impermeable polyethylene plastic liner and surrounded by a timber or soil berm. Reinforced plastic sheeting will be placed over the treatment cell to prevent precipitation from affecting the remediation process and preventing runoff from entering surface and groundwater sources.

Fish and Fish Habitat. Sand excavation activities will occur below OHW in April and/or early May of 2009 while the Naknek lakeshore is exposed. The lakeshore will be leveled and re-graded as close as possible to its pre-excavated condition to ensure spawning habitat is not adversely impacted.

Wildlife and Wildlife Habitat. Excavation activities will occur in April and/or early May of 2009 before brown bears and other primary wildlife species inhabit the project area. All sand not removed for remediation will be returned to the lakeshore. The lakeshore will be leveled and re-graded as close as possible to its pre-excavated condition. The sand remediation area will be enclosed by an electrified perimeter fence to prevent brown bears and other wildlife from coming into contact with the contaminants.

Wetlands. The proposed project site is located within a lacustrine wetland system which is normally inundated by Naknek Lake during the summer and fall months. Excavation activities will be limited to approximately 100 cubic yards of sand within an estimated 50 ft by 50 ft area adjacent to the Brooks Camp ranger station access trail. Excavation activities will occur while the site is dewatered during April and/or early May of 2009. After the contaminated sand is removed, the lakeshore will be leveled and re-graded as close as possible to its pre-excavated condition. No new fill materials will be placed within the project site. Contaminated sand remediation activities will occur within the Brooks Camp leach field, a previously disturbed upland area.

Cultural Resources. Should previously unknown cultural resources be identified during project implementation, work will be stopped in the discovery area and the NPS will perform consultations in accordance with federal regulations (36 CFR 800). NPS will abide by provisions of the Native American Graves Protection and Repatriation Act of 1992. Any artifacts recovered during the implementation of the project at any of the project sites will be accessioned, cataloged, preserved, and stored in compliance with the *NPS Cultural Resources Management Guidelines*.

## **RATIONALE FOR THE DECISION**

Due to the rediscovery of fuel-contaminated sand along the Naknek shoreline, the NPS will be excavating, testing, and remediating the fuel-contaminated sand during the spring of 2009. The selected alternative, Alternative B (Remove Contaminated Sand from Naknek Lake Shoreline and Remediate within the Brooks Camp Area of KATM), will achieve the purpose and need for the project. This alternative will meet the requirements of federal, state, and local environmental protection laws, regulations, and policies and will ensure the natural resources, processes, systems, and values of KATM are preserved and protected. The No Action alternative (Alternative A) was rejected because it will not achieve the purpose and need for the project: to allow for the safe removal/remediation of fuel-contaminated sand sediments along the shore of Naknek Lake.

## **SIGNIFICANCE CRITERIA**

The selected 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. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.*

The EA evaluated the effects of Alternative B on air resources, water resources, fish and fish habitat, wildlife and wildlife habitat, wetlands, cultural resources, and soundscape. As documented in the EA, the effects of the proposed action will range from negligible to minor depending on the resource. There will be no restriction of subsistence uses.

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

Implementation of Alternative B will not affect public health or safety. Excavation and remediation activities will occur during the spring of 2009 before Brooks Camp is opened for public use on June 1. The soil remediation cell will be located, secured (electrified perimeter fence), and covered (impermeable plastic sheeting) within the Brooks Camp leach field away from the camp's public use areas.

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

The project area is located within the Brooks River Archeological District National Historical Landmark. Should previously unknown cultural resources be identified during project implementation, work would be stopped in the discovery area and the NPS would perform consultations in accordance with federal regulations (36 CFR 800). NPS would abide by provisions of the Native American Graves Protection and Repatriation Act of 1992. Any artifacts recovered during the implementation of the project at any of the project sites would be accessioned, cataloged, preserved, and stored in compliance with the *NPS Cultural Resources Management Guidelines*.

Naknek Lake is recognized by the State of Alaska as important for anadromous fishes, including sockeye salmon and coho salmon. Salmon migrate to spawning areas in the lake and its tributaries in the spring and summer, but none are known to spawn along the lake shore in the project area.

The fuel-contaminated sand is located within a lacustrine wetland system which is normally inundated by Naknek Lake during the summer and fall months. Excavation activities will be limited to approximately 100 cubic yards of sand within an estimated 50 ft by 50 ft area adjacent to the Brooks Camp ranger station access trail. Excavation activities will occur while the site is dewatered during April and/or early May of 2009. After the contaminated sand is removed, the lakeshore will be leveled and re-graded as close as possible to its pre-excavated condition. No new fill materials will be placed within the project site.

*(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 will not be highly controversial. The environmental analysis concluded that the removal and remediation of fuel-contaminated sand will have negligible to minor impacts on park resources. The NPS sent the EA to 36 agencies, organizations, and individuals for public review. No comments were received.

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

The effects of the selected alternative do 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.*

The selected alternative will not set a precedent for future actions.

*(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 cumulative significant impact on the environment. Significance cannot be avoided by terming an action temporary or breaking it down into small component parts.*

The EA considered similar past and future actions related to contaminant remediation and park development projects within and outside of the Brooks Camp area. The analysis concluded that the proposed fuel-contaminated sand remediation project is not a cumulative significant impact on the environment.

*(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 historic resources.*

The selected alternative will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places.

*(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 its habitat. The action will include a measure to avoid disturbance to Steller's eiders (a Threatened species) present within the area (see Mitigation Measures section).

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

The selected alternative will not violate any Federal, State, or local law.

## **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, the National Historic Preservation Act, and Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands). There will be no restriction of subsistence activities as documented by the Alaska National Interest Lands Conservation Act (ANILCA) 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 (NEPA) 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.