

National Park Service  
U.S. Department of the Interior

Katmai National Park and Preserve  
Alaska Region



# Olga Lake Right-of-Way Certificate of Access

## *Environmental Assessment*

*REVISED June, 2019*





As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to assure that their development is in the best interests of all. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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#### **ON THE COVER**

View of Olga Lake from along the proposed right-of-way trail corridor.

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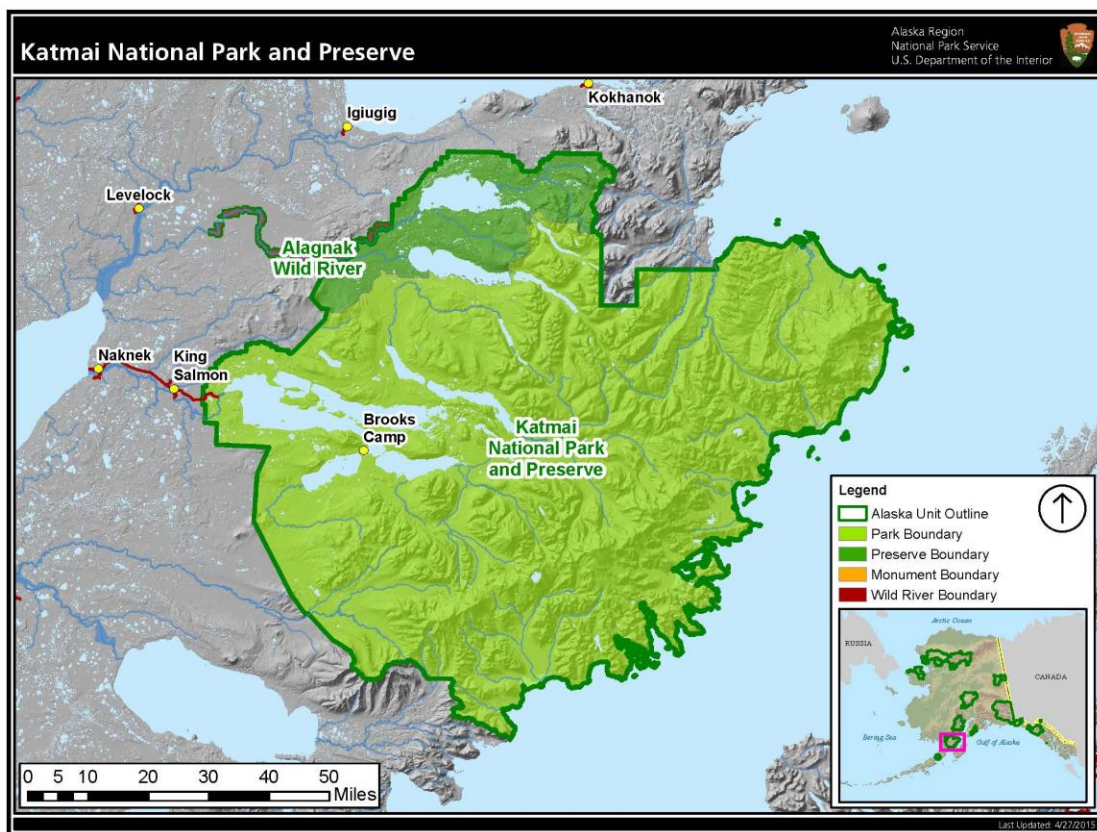
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# 1 Proposed Action

The National Park Service (NPS) proposes to issue a Right-of-Way Certificate of Access (RWCA) to Chris and Linda Branham (inholder) who own private property (KATM-04-136 and KATM 04-137) southwest of Lake Brooks along Headwaters Creek within Katmai National Park and Preserve (Figure 1).

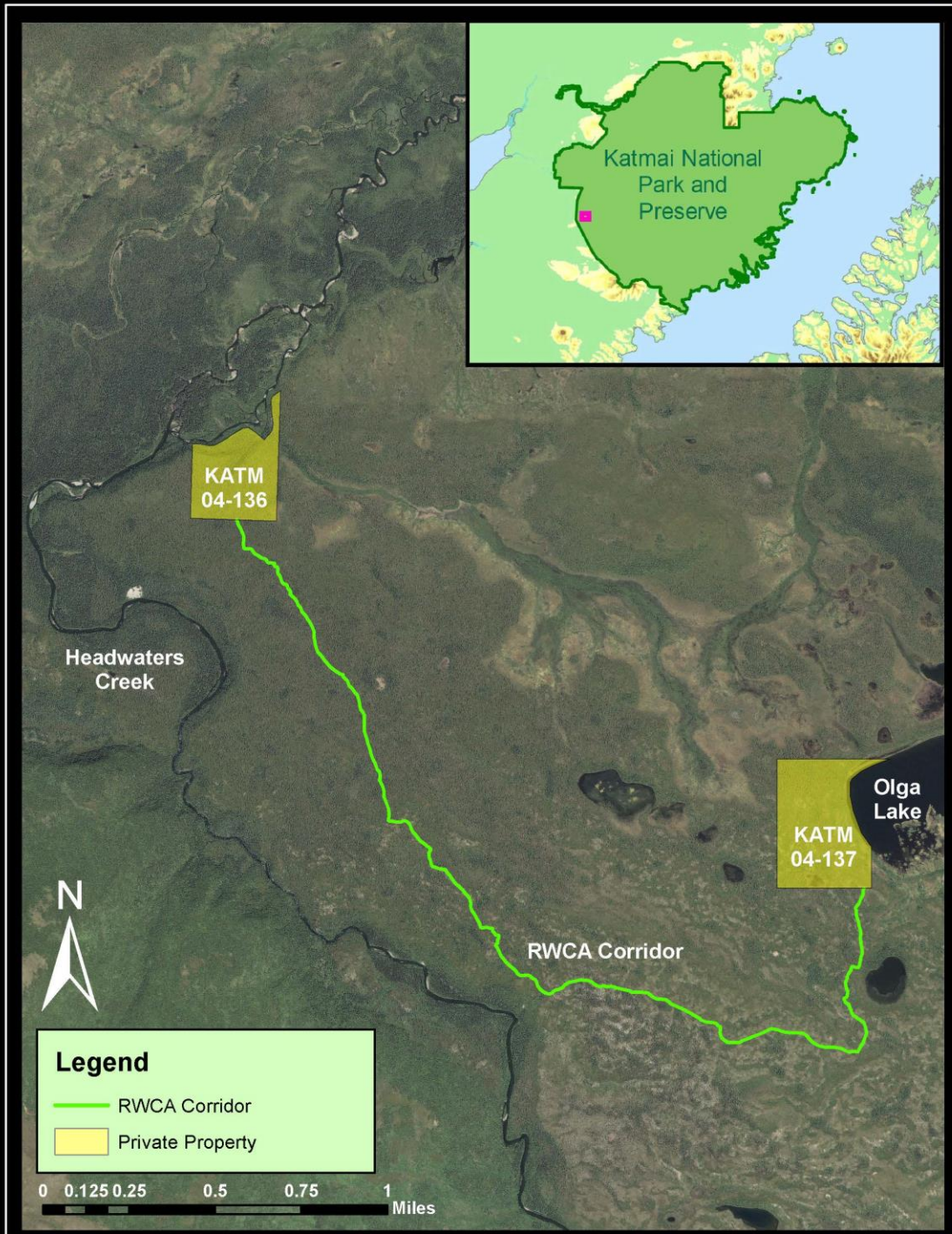
# 2 Purpose and Need

The purpose of the project is to issue the landowners of parcel KATM-04-136 a RWCA authorizing the creation of an off-road vehicle (ORV) trail and the use of ORVs to access to their privately owned land (inholding) located within Katmai (Figure 2) in compliance with the Alaska National Interest Lands Conservation Act (ANILCA) Section 1110(b). The inholder has requested ORV access to their inholding on Headwaters Creek for themselves, their family, friends, and guests, and to allow for the transportation of building supplies with the intent of constructing non-commercial private accommodations. The NPS action is needed to ensure that the landowner has adequate and feasible means to access their inholding that is entirely encapsulated by Katmai lands while protecting park resources and values.



**Figure 1: Katmai National Park and Preserve**





**Figure 2. Olga Lake Right-of-Way Certificate of Access project in Katmai National Park and Preserve**

### 3 Background

Access to inholdings in Alaska National Parks is governed by the Alaska National Interest Lands Conservation Act (ANILCA) Section 1110(b), which provides that the NPS shall provide adequate and feasible access to privately owned lands that are encapsulated by public land.

ANILCA Section 1110(b):

*“Notwithstanding any other provisions of this Act or other law, in any case in which State owned or privately owned land... is within or effectively surrounded by one or more conservation system units... the State or private owner or occupier shall be given by the Secretary such rights as may be necessary to assure adequate and feasible access for economic and other purposes to the concerned land...”*

Issuing a RWCA is the NPS’s way of recognizing the legal access rights of inholders. The RWCA describes and permits the routes to the inholding across NPS lands, the mode of travel, and the maintenance the inholder may perform. The NPS would identify the access route, methods of access, and issue regulations governing use of the route in order to protect park resources and minimize potential impacts to park resources and values.

### 4 Issues

#### Issues Selected for Detailed Analysis

**Wilderness:** The proposed RWCA occurs within designated wilderness. Wilderness impacts due to the development of an ORV trail would adversely affect each quality of wilderness character. The untrammeled, undeveloped, natural, solitude and primitive and unconfined recreation, and other features of value qualities of wilderness character would be adversely affected by the construction and operation of an ORV trail.

**Soils:** Repeated use of ORVs and trailers on this trail could over time result in accelerated levels of erosion, compaction, and the incising of the sensitive tundra soils that exist in this area. The trail would be largely unimproved which would increase the likelihood of the development of ruts, puddles, and other drainage issues.

**Vegetation:** Issues related to vegetation include the clearing of trees, shrubs, and mosses in order to route the trail through the right-of-way corridor. Invasive species could become established within an area of the park where they currently are not known to exist. Orange Spruce Rust is a widespread and naturally occurring disease of spruce trees in this area. It is not considered likely that the establishment or operation of a motorized trail would contribute to its spread.

**Wildlife:** Brown/grizzly bears are known to exist in this area. Creation of a trail in this part of the park would increase the likelihood of bear/human interactions. Bears often take the path of least resistance when moving through their habitat areas, once the trail has been created they would likely use it for travel. The Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act

requires consideration of impacts to bird species when clearing areas for developmental projects. Increased access to Headwaters Creek would potentially result in increased fishing activity along the creek. This could result in elevated pressure on the creek and adverse impacts to fish and fish habitat.

### **Issues Considered but Dismissed**

The NPS considered but dismissed from further analysis other possible resources that are not known to exist in the area including Indian Trust Resources, paleontological resources, Native grave sites, and threatened and endangered species. The following issues were also identified, considered, and dismissed from further analysis:

**Wetlands:** The proposed trail corridor occurs within an area of the park that is known to contain areas of wetlands. Katmai National Park and Preserve deployed a team to ascertain the amount of wetlands that would be impacted by the construction of this trail in the fall of 2018 (NPS, 2018[a]). After conducting this field survey it was determined that the trail could be routed in such a way that would keep the trail corridor on high ground avoiding wet areas and would not directly impact wetlands within the park.

**Cultural Resources:** The area that has been proposed to construct a right-of-way access trail had not previously been surveyed by the NPS. In response to the application for right-of-way access the trail corridor was surveyed by NPS Archeologists (NPS 2018[b]). This pedestrian survey identified no archaeological resources within the trail corridor.

## **5 Alternatives**

### **Alternative 1: No Action (Existing Conditions)**

Under Alternative 1, an ORV trail providing access to KATM 04-136 would not be permitted. Access to the inholding would continue by routes and methods determined by the inholder with no formal agreement with the NPS. The route, method, or terms and conditions of access would not be developed. The area would remain closed to ORV use and no formal trail would be developed through designated wilderness. There would be no additional impacts to vegetation, wildlife, soils, or wilderness character in the proposed project area. Refusal to issue a RWCA to the landowner when no other adequate and feasible means of access to the inholding otherwise exists would be in violation of ANILCA Section 1110(b), 43 CFR 36.10, and would violate the inholders' statutory rights.

### **Alternative 2: Issue RWCA Authorizing ORV Trail and Use from KATM-04-137 to KATM 04-136 (Proposed Action and Preferred Alternative)**

Under Alternative 2 the NPS would issue a RWCA to the inholders authorizing the creation and use of an ORV trail to access their inholding. The trail would originate at the southwest corner of inholding KATM-04-137 adjacent to Olga Lake and would create an access way connecting to inholding KATM 04-136 adjacent to Headwaters Creek. This right-of-way would become the primary means for the inholder to access their inholding adjacent to Headwaters Creek.



The proposed right-of-way would be approximately 3 1/2 miles long, 5 feet wide, and would have an approved vegetative clearance area of 1 foot on each side of the trail (7-foot total right-of-way width). The proposed route suggested by the landowner in the request for a right-of-way was surveyed by NPS archeologists and a botanist in 2018 (NPS 2018 [a], NPS 2018 [b]). The trail would follow a prescribed route, agreed upon by NPS and the applicant that would minimize potential environmental impacts by avoiding wetlands and restricting activities to the corridor that survey has shown to not contain surface archeological resources.

The surface of the trail would remain mostly unimproved, with some sections receiving minor improvements such as timber lining, cut and fill, and grading. Cut and fill from within the RWCA would be limited to the surface level removal of topsoil and other materials from one section of the trail and the deposition of those materials onto another section of the trail. The areas identified along the RWCA trail corridor that require cut and fill would be identified within the inholders approved trail plan. Fill and other natural materials used to improve the trail must be sourced from the RWCA corridor itself or from inholdings KATM-04-136 or KATM-04-137.

Six pullouts would be authorized along the length of the trail occurring at approximately 1/2 mile intervals to allow for the safe passage of ORVs traveling in opposite directions and to provide for the protection and preservation of park resources in the RWCA corridor. The pull-outs are required by the NPS and would be located in areas where there would be the least environmental impacts and trail maintenance concerns by locating them in areas where vegetative clearance activities would be minimal and on relatively level and dry land. These pullouts would be approximately 15 feet in width by 20 feet in length, would be cleared of vegetation, and have compacted or minimally improved surfaces.

The Olga Lake and Headwaters Creek area is only accessible by float plane seasonally from May thru September, as is typical for many backcountry locations in Southwest Alaska. Under ideal conditions, the landowner would potentially have access to Olga Lake up to 150 days per year. In order to provide for the protection of park resources, the NPS proposes to stipulate that the landowner adhere to a maximum number of round trips between Olga Lake and Headwaters Creek of 200 per year. This limit would allow for at least 1 round trip per day by ORV with the option to increase that amount to more than one per day during periods of increased activity. The landowner has indicated this will meet the needed level of access.

The use of mechanized equipment and motorized tools for the construction and maintenance of the ORV trail would be authorized. This would include chainsaws and other power tools necessary for clearing vegetation as well as digging and removal of obstructions along the trail corridor. The use of ORVs with blades attached to perform cut and fill and grading would also be authorized.

#### Proposed Permit Stipulations

- ORV use is restricted to within the private inholdings, RWCA trail corridor, and the 6 designated pullouts in order to prevent trail braiding in the Olga Lake and Headwaters Creek area.

- The inholder would produce a trail plan for review and approval by NPS prior to commencing construction.
- Only the inholder and their guests are authorized to use motorized vehicles on the ORV trail authorized by the RWCA.
- Limited use of mechanized equipment during construction and maintenance of the ORV trail would be authorized by the superintendent.
- ORVs would be operated at speeds not exceeding 15 mph in order to preserve the trail surface and for safety purposes.
- Parking along the ORV trail is not permissible. ORVs in the Headwaters Creek and Olga Lake area of the park must be parked within the private inholdings.
- Vehicles and trailers that are brought into the Olga Lake and Headwaters Creek area would be thoroughly cleaned and free of soil, vegetation, seeds, or propagules of any sort. All vehicles to be used in the Olga Lake and Headwaters Creek would be inspected by the NPS prior to being brought into the park.
- Hunting is not permitted on Katmai National Park lands surrounding the inholding, including within the RWCA access corridor.
- The inholder is responsible for all trail maintenance and would be required to maintain the trail to the specifications outlined in the RWCA, including:
  - Trail width of five (5) feet;
  - Vegetative clearance of one (1) foot on each side of the trail (total right-of-way width not to exceed 7 feet);
  - Incising of the trail surface should not exceed four (4) inches; and,
  - Six (6) pullouts are required at approximately ½ mile intervals.
- The NPS would have access to the trail originating on KATM-04-137 adjacent to Olga Lake in order to conduct maintenance inspections, survey for invasive plant species, and other management purposes.
- The landowner would be authorized for no more than 200 round trips in a motorized vehicle on the access route per calendar year.

### Mitigating Measures

#### Cultural Resources

- The park would provide information concerning Katmai National Park and Preserve cultural resources and offer cultural resource awareness training to the land owner and his staff.

Information would include proper procedures to follow should an inadvertent discovery occur during trail construction or maintenance activities.

- If cultural resources are discovered during trail construction or maintenance activities, work would be halted at the discovery site, the discovery would be protected, and the Katmai National Park and Preserve Superintendent or Chief of Cultural Resources would be notified. Appropriate action would be taken to avoid adverse effects to any cultural resources.
- In the event that human remains are discovered during maintenance activities, all work on the project must stop and the park archeologist contacted immediately. As required by law, the coroner will be notified first. All provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.
- Katmai cultural resource staff will visit the RWCA trail corridor periodically to assess the trail corridor for previously unidentified cultural resources.

#### Natural Resources

- The park would provide information concerning Katmai National Park and Preserve natural resources and offer natural resources awareness training to the landowner and staff proposed for on-site work. Information would include proper procedures to follow during wildlife encounters and identification of invasive plant species.

#### Vegetation and Soils

- To prevent compaction, incising, shearing, erosion, or deposition of soils and substrates the RWCA would authorize minor improvements to the trail such as timber lining, limited cut and fill, and grading, as outlined in the inholders approved trail plan.
- Materials used for trail improvements would be sourced from inholdings within in the Olga Lake or Headwaters Creek area or from within the right-of-way corridor.
- The project area would be surveyed for invasive plants prior to trail construction. The trail corridor would be closely monitored periodically after project completion to ensure that colonizing invasive plants are rapidly found and addressed.
- To prevent invasive plant species becoming established within the proposed project area, all vehicles and trailers being brought into the Olga Lake and Headwaters Creek area would be inspected by NPS for foreign soils and vegetation.

#### Wilderness

- NPS would encourage the landowner to use the RWCA route only when it is necessary for transportation to and from the inholding.
- The use of ORVs is only permitted within the RWCA trail corridor and on the inholders' private parcel. The surrounding park lands are designated wilderness areas and the use of ORVs is prohibited.

## Wildlife

- Brown bears and other wildlife occurring within the park should not be approached and a minimum distance of 50 yards should be maintained at all times. All instances of negative interactions with wildlife within the park should be reported to Katmai National Park and Preserve law enforcement personnel.
- To provide for the protection of bald and golden eagles, the NPS must be notified of any eagle nest occurring within the RWCA corridor. The U.S. Fish and Wildlife Service (USFWS) *National Bald Eagle Management Guidelines* recommend specific buffer distances from bald eagle nests, community roosting sites, and foraging areas. Should a nest need to be removed for construction of the ORV trail, the park must be notified and an incidental take permit would need to be acquired from the U.S. Fish and Wildlife Service (USFWS 2019).
- NPS would survey the project area for eagle nests prior to trail construction and periodically thereafter.
- The NPS would complete a fish survey on Headwaters Creek within the Olga Lake area prior to trail construction. The creek would be monitored periodically after the construction period to determine the effects on fish and fish habitat related to increased fishing activities.

## Alternatives Considered but Dismissed

### Airstrip Adjacent to KATM 04-136

The National Park Service considered issuing a RWCA authorizing the development of an airstrip adjacent to parcel KATM-04-136 in order to provide access by fixed-wing airplane to the inholding. The airstrip would measure 1500 feet long by 40 feet wide and would include a motorized trail to connect the airstrip to the inholding.

It was determined during internal analysis of the airstrip option that the potential impacts to wildlife, soils, vegetation, and wilderness were thought to be comparable or greater than those associated with an ORV trail (Alternative 2). The topography surrounding KATM-04-136 would necessitate the airstrip being placed wholly on NPS lands where the ground is more level, which would require the construction of a connecting motorized trail. The construction of an airstrip is more intensive than that associated with an ORV trail and would require large machinery to be brought into the area, which would have the potential to increase impacts to wilderness should the equipment need to be brought in overland from Brooks Camp. Additionally, it would be more difficult to avoid the removal of large diameter trees from the construction area which would result in greater impacts to wildlife and vegetation.

NPS lands in Alaska are generally open to airplane operations, so any strip constructed on NPS land would be managed by the park as a public facility and would not be in place for the sole use of the landowner (ANILCA Section 1110). Additionally, the predominant means of travel to remote locations in southwest Alaska is by float plane. While it is possible to reconfigure planes to land on wheels rather than floats, the extensive availability of landing lakes in southwest Alaska and the



relative absence of airstrips would cause unnecessary burden to the landowner to switch to wheels whenever accessing the inholding.

For these reasons, the airstrip alternative was determined to be neither adequate nor feasible and has been dismissed from further consideration.

### **Headwaters Creek Boat Access from Lake Brooks**

The National Park Service considered issuing a RWCA to access the inholding by boat traveling up Headwaters Creek from Brooks Lake. Under this alternative the landowner would land float planes on Brooks Lake and travel up creek by boat from the mouth of Headwaters Creek to KATM-04-136. In support of these operations an area along the south-western shoreline of Brooks Lake would be included in the RWCA and authorized to store boats needed to make the trip up creek to the inholding.

The trip from Brooks Lake to the inholding is approximately 13 miles in length and would take approximately 4 hours to complete by boat up the narrow, windy, meandering creek. The park conducted an aerial overflight of the creek from the mouth to the inholding in September of 2018 and identified numerous downed spruce trees along the creek channel that would impede the navigability of the creek by boat (NPS Aerial Survey, 2018). Additionally, an attempt was made by park staff to reach the Headwaters Creek inholding by boat from Brooks Lake in June 2019. Low water levels in the creek channel and large amounts of downed spruce prohibited the crew from reaching the inholding.

In discussing this alternative, the Park considered the advantages and disadvantages of authorizing a 13 mile motorized boat RWCA through designated wilderness compared to the proposed action, where the access would be granted via a 3.5 mile overland trail through designated wilderness. It was determined that an overland trail was preferable due to less potential for environmental impacts associated with the RWCA, the length of time it would take to navigate the creek was not adequate, and maintenance requirements of keeping the creek channel open throughout the season would be overly burdensome.

For these reasons the creek access alternative was determined to be neither adequate nor feasible and has been dismissed from further consideration.

**Table 1. Summary of Alternatives**

<b>Action</b>	<b>Alternative 1: No Action</b>	<b>Issue RWCA Authorizing ORV Trail and Use from Olga Lake to KATM 04-136 (Proposed Action and Preferred Alternative)</b>
<b>Issue RWCA</b>	<ul style="list-style-type: none"><li>The Park would not issue a RWCA to the inholder and the provisions of ANILCA would not be implemented.</li></ul>	<ul style="list-style-type: none"><li>Katmai would issue a RWCA to the landowner authorizing construction, maintenance, and operation of an ORV trail to access their inholding.</li></ul>

Action	Alternative 1: No Action	Issue RWCA Authorizing ORV Trail and Use from Olga Lake to KATM 04-136 (Proposed Action and Preferred Alternative)
<b>Authorize construction and operation of ORV trail</b>	<ul style="list-style-type: none"> <li>No ORV trail would be authorized within park wilderness areas.</li> <li>Access to the inholding would be restricted to currently authorized methods with no formal agreement with NPS.</li> </ul>	<ul style="list-style-type: none"> <li>The ORV trail would be approximately 3.5 miles long, 5 feet wide, with 1 foot of vegetative clearance on each side (total width of 7 feet).</li> <li>Six pull-outs measuring 15 feet by 20 feet would be required.</li> <li>The trail surface would be minimally improved with natural materials obtained from within the RWCA corridor or the inholding.</li> <li>Motorized and mechanized equipment would be authorized for construction and maintenance of the ORV trail.</li> </ul>

## 6 Affected Environment

### Wilderness

National Parks in Alaska constitute the largest amount of lands protected as Wilderness in the United States of America, at over 32 million acres. These lands are managed as wilderness under The Wilderness Act and under the provisions of ANILCA. Wilderness lands are designated by an act of Congress and represent the highest level of land protection afforded to federal lands.

Wilderness areas are part of the National Wilderness Preservation System and are administered for...”the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use as wilderness...” and are further defined as “... an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain... (The Wilderness Act, 1964).” Lands are managed to protect their wilderness character, including maintaining their natural and undeveloped state as well as providing unique opportunities for solitude and primitive recreation, and protecting ecological, geological, and other features of scientific, educational, scenic, or historical value.

Katmai National Park and Preserve contains 3.9 million acres of lands designated as wilderness which contain a diversity of intact ecosystems, including riparian areas, mountain summits, massive ice fields, rugged coastlines and isolated beaches, seemingly endless tundra and boreal forests. These intact ecosystems support large and stable populations of bear, moose, wolves, wolverines, lynx as well as undisturbed habitat for migrating birds such as arctic terns, bald eagle, ducks and many songbirds.

This area has also been populated by humans for nearly 10,000 years and offers rich archeological resources as well as ethnographic understanding of early humans living in sub-arctic ecosystems. The landscape is notably undisturbed by modern human actions; there are no river dams, no power lines transecting the land, and the wilderness remains free of roads. Night skies are minimally disturbed by light pollution and offer extraordinary views of the Milky Way galaxy and aurora borealis. The soundscapes within the Katmai wilderness are filled with animal calls, wind, and rushing waters and predominately remain natural with infrequent interruptions from airplanes or motorboats.

Permanent structures are scattered throughout the Katmai Wilderness but are few in number and are separated by great distances. The purposes of these structures varies but they largely exist to protect human health and safety, while some are in place for scientific studies and landscape scale monitoring activities.

## **Soils**

The soils in this area are comprised mainly of subarctic post-glacial moraine. The make-up is primarily sand, cobbles, boulders, and volcanic ashes from the 1912 Novarupta eruption covered in a layer of tundra mosses and lichens. The soils in the project area retain water and support vast areas of wetlands. The soils identified for the motorized trail would likely be well-drained due to the proposed trail location in upland areas and small ridges located within the project area, and not in the low-lying wetland zones (NPS 2018[a]).

This region of the Park contains no developed trails or roads but is crisscrossed with game trails (Figure 3). These natural trail systems are often devoid of vegetation and the soils have been moderately compacted by repeated use from large mammals. Game trails often follow the path of least resistance, avoid areas that are difficult to traverse, and serve as connections for animals between areas of highly concentrated food sources.

## **Vegetation**

The environment of the proposed route is comprised of post-glacial moraine rising a few hundred feet in elevation from the lowlands near Olga Lake to an alluvial terrace passing through a mix of vegetative habitats (NPS 2018[a]). Open Spruce Woodland habitat dominates the vegetation composition at nearly half of the proposed ORV route, but Dwarf Shrub habitat is common and mixed deciduous and conifer forest is present in lower percentages. In places the vegetation understory is quite thick and includes moss and herbaceous plants.

Vegetation in this area mainly consists of dwarf birch, narrow-leaved labrador tea, crowberry, alpine blueberry, lowbush cranberry, salmonberry, black spruce, willow, alder, as well as numerous lichens and tundra mosses (NPS, 2018[a]).

## **Wildlife**

Brown bears occur throughout Katmai National Park and Preserve. The Park is home to the largest protected population of brown bears in North America. Brown bears are most commonly

encountered along fishing streams and the coast, and often den on mountain slopes (NPS 2008). Other common mammals include moose, caribou, red fox, wolf, lynx, wolverine, river otter, mink, marten, weasel, porcupine, marmot, snowshoe hare, red squirrel, and beaver (NPS 2008).

Headwaters Creek provides critical spawning grounds for sockeye salmon (*Oncorhynchus nerka*) that migrate from Bristol Bay through Naknek River and Lake, Brooks River and Lake, and up Headwaters Creek each year to complete their natural life cycle. Sockeye salmon spawning in Headwaters Creek represent the majority of those spawning in Lake Brooks and its tributaries. The abundance of spawning salmon supports a healthy population of rainbow trout (*Oncorhynchus mykiss*) which feeds on the salmon eggs, alevin, and fry. Growth rates of rainbow trout have been linked to habitat heterogeneity, and the associated variation in sockeye salmon spawn timing in other streams of the Bristol Bay Region (Ruff et al. 2011). Human impacts that alter relationships between predators, prey, and their shared habitat, could have unintended ecological effects.

Katmai's lake edges, marshes, and wetland areas serve as nesting, feeding, and resting sites for ducks, loons, arctic terns, tundra swans, and grebes. Ground nesting ptarmigan and grouse feed and raise their young in upland habitat. Numerous migratory and nesting songbirds including the Gray-cheeked and Swainson's Thrush, and Blackpoll and Orange-crowned Warbler, utilize the forest and low elevation tundra, wetlands and shrubs thickets. Trees along lakeshores provide nesting sites for bald eagles, hawks, falcons, and owls (NPS 2008).

## 7 Impact Analysis

### **Alternative 1: No Action (Existing Conditions)**

Under Alternative 1, the ORV trail providing access to KATM-04-136 would not be permitted. There would be no additional impacts to area soils, vegetation, or wildlife resulting from access to the inholding. Wilderness areas in Katmai National Park and Preserve would remain unaltered and use of ORVs would remain prohibited. The NPS would have no formal agreement with the landowner regarding access to their private inholding and the provisions of ANILCA would not be implemented.

### **Alternative 2: Issue RWCA Authorizing ORV Trail and Use from Olga Lake to KATM 04-136 (Proposed Action and Preferred Alternative)**

#### ***Wilderness***

The wilderness character of this area would be adversely affected by the development and operation of an ORV trail. The Wilderness Act outlines five qualities associated with wilderness character: Natural, Undeveloped, Untrammeled, Solitude and Primitive and Unconfined Recreation, and Other Features of Values. These qualities represent the baseline for managerial decisions by the NPS and other federal agencies when determining how best to manage wilderness areas.





**Figure 3: Game trail along the proposed RWCA corridor.**

The untrammeled quality of wilderness character would be impacted by the presence and operation of an ORV trail. The wilderness in Katmai National Park in many ways represents a completely intact ecosystem that is unhindered by modern human control or manipulation. The inclusion of an ORV trail and motorized ORV use outlined in Alternative 2 would add a sense of human manipulation of the environment which would adversely affect the untrammeled quality that currently exists within this part of the park.

The natural quality would be impacted by the inclusion of an ORV trail within wilderness where one currently does not exist. Elements important to natural ecosystems would be impacted by the existence of an ORV trail and the use of motorized vehicles including the natural behavior of wildlife in the area, the removal of the vegetation within the RWCA corridor, and changes in the natural topography of the area could impact hydrology and accelerate erosion.

The undeveloped quality of wilderness character would be impacted by the addition of an ORV trail within the project area, by the use of motorized equipment during development and maintenance of the trail, and by the use of motorized vehicles along the trail. The park lands south and west of Brooks Camp where this project takes place are largely undeveloped areas of wilderness. There are currently no permanent inhabitants in this area and developments are limited to trap lines and small

trapping cabins, largely degraded, that existed prior to the passage of ANILCA in 1980 when the lands were designated as wilderness. The authorization, creation, maintenance, and use of a permanent ORV trail would constitute a new development and introduce motorized vehicles and tools, all of which adversely affect the undeveloped quality of wilderness character.

The sheer size of the wilderness areas in Katmai National Park and Preserve offers visitors a unique and nearly unparalleled opportunity for solitude and primitive and unconfined recreation. This quality affords visitors the opportunity to engage fully with the wilderness experience and to challenge themselves both mentally and physically. Insertion and extraction from the Katmai wilderness is often achieved via fixed wing aircraft, but these mechanical intrusions are limited and vanish once their primary mission has been achieved. The inclusion of an ORV trail within designated wilderness would add a permanent sign of human influence over the landscape and would greatly detract from an individual's wilderness experience.

The corridor that has been proposed for the ORV trail would route ORVs along ridges and other elevated topography in order to avoid low lying wetland areas. This would cause the vehicles to be seen at greater distances from surrounding wilderness areas essentially silhouetting the vehicles against the sky and making them more obvious. This, coupled with the fact that the vehicular noise generated from operation would naturally draw wilderness user attention, would have a detrimental effect to the vast and remarkable views and esthetics afforded by the Katmai wilderness.

Backcountry visitors experiencing the Katmai wilderness would also be subjected to encroachment of the visual, esthetic, and audible values which would result from the addition of ORVs to the landscape.

### **Soils**

Development of the proposed ORV trail would impact approximately 2.2 acres of soils that would either be removed, compacted, or otherwise altered along the length of the RWCA corridor. The trail would impact approximately 2.1 acres of soils while the six pull out areas would impact an additional 0.1 acres. The impacts would primarily be associated with the removal of vegetation and topsoil to stabilize the contact surface of the trail, and compaction of the soil surface, which would lead to increased levels of erosion and drainage issues (USDA 2013).

The removal of vegetation to construct the trail would expose underlying soil to erosion by water. Trail use would further compact the soil and would create depressions for water to collect or channels for water to flow. Water flowing along the trail would lead to accelerated levels of erosion and the formation of gullies (USDA 2013).

Through repeated use trails become incised, rutted, riddled with potholes, and depending on other factors could develop wet, muddy, or impassable areas (USDA 2013). In this situation the inholder would need to maintain the trail by back-filling impassable areas with natural materials obtained from within the inholdings or from the RWCA corridor. Although not permissible in the RWCA, ORV users would likely reroute around impassable areas on to park lands outside of the RWCA corridor. This would expand impacts to adjacent soils that have not been improved or hardened to support ORV use and would further expand impacts to soils in this area.





**Figure 4: Section of Proposed RWCA Containing Dense Underbrush.**

### ***Vegetation***

This project would involve direct impacts to approximately 3.0 acres of vegetation that occurs within the right-of-way corridor attributed to the ORV trail and associated pull-outs. The vegetative ground cover along the physical trail corridor would be removed and an additional 1 foot of vegetative clearance would be authorized on each side of the trail. Vegetation such as black spruce, birch, alders, willows, blue joint grass and bluegrass, herbaceous plants, native berry bushes, downed logs, rocks, and other materials would be removed from the proposed area.

To the maximum extent possible, the Park would work with the inholder to route the trail in such a way that would limit or negate the removal of large diameter trees (>6 inch diameter trunk size) and to avoid areas of thick tundra moss and dense underbrush while remaining within the surveyed trail corridor and maintaining the general direction of the trail (Figure 4). Large diameter trees that occur within the vegetative clearance area adjacent to the trail may be allowed to remain in place but would be limbed in order to keep the access way clear and increase safety.

Invasive plant species are more likely to become established and take hold in areas that are affected by ground clearing and disturbance. The removal of natural vegetation and soil disturbance to clear

the pathway for the ORV corridor in addition to increased visitor use along the trail would increase the likelihood of invasive plant introductions. To address this issue, the Park would increase monitoring of this area post-ORV trail construction and would seek to work with the inholders to identify invasive species before populations become established creating the potential to spread to adjacent areas.

### **Wildlife**

The habitat in the Olga Lake and Headwaters Creek areas of the Park are excellent for brown/grizzly bears (Figure 5) and other wildlife. The recent surveys of this area investigating wetlands and archeological resources identified high amounts of bear sign throughout the RWCA corridor (NPS 2018[a], NPS 2018[b]). Construction and operation of an ORV trail would cause habitat fragmentation and likely cause displacement and disruption to natural movement of bears due to increased activity, noise, and fugitive dust. Disruption to bear behavior and natural movement patterns are anticipated from the project as bears that approached the project area would encounter people and machinery.

The addition of an ORV trail in this area and elevated levels of human activity is likely to increase bear/human interactions. The Park requires the people do not approach bears within 50 yards in order to provide for the safety of individuals and bears (NPS 2006). Increased interactions between bears and humans leads to the habituation of bears to human presence, which can result in increased risk of bear-human conflict. The Park requires that all food supplies and other bear attractants are transported in bear proof containers and that bear attractants are not left outside of the control of humans (NPS 2018[c]).

Other species that occur in this area of the park would potentially experience habitat loss, disturbance, displacement, and mortality from vehicle collisions due to the presence of an ORV trail. As native vegetation is cleared away and soils are removed or compacted within the RWCA corridor, mammals such as snowshoe hares, marten, red fox, mink, and weasels would be forced to abandon burrows used for nesting and sheltering, and potentially lose foraging areas.

Birds that inhabit the area are sensitive to increased noise and human activity including ducks, loons, arctic terns, grouse, tundra swans, grebes, raptors, thrushes and warblers. This is particularly true during the nesting season. For this reason, vegetative clearing activities necessary for trail construction should be avoided during late spring and summer (April through July) to avoid impacting nesting birds. Removal of a Bald and/or Golden Eagle nests from the RWCA corridor would require an incidental take permit from the U.S. Fish and Wildlife Service (USFWS) regardless of the time of year.

Providing an alternative means of access to Headwaters Creek could open up the creek to increased pressures from anglers utilizing the creek. Headwaters Creek is an active salmon spawning ground, which also supports a healthy population of rainbow trout. Adverse impacts to fish and fish habitat could occur if increased access generates above-average fishing pressure as anglers occupy the creek and creek banks and remove adult fish from the resident population. This is could be concerning,



given the relatively small size of Headwaters Creek and its importance to park resources and values as the major salmon-bearing tributary of Lake Brooks. To address this issue, the Park would increase monitoring of Headwaters Creek fish populations and habitat in order to determine the effects of increased access and potential increases in fishing activities in this area.



**Figure 5: Brown/grizzly bear scat predominately containing blueberries located along the RWCA corridor.**

**Table 2: Summary of Impacts**

<b>Issue</b>	<b>Alternative 1: No Action</b>	<b>Alternative 2: Issue RWCA Authorizing ORV Trail and Use from Olga Lake to KATM 04-136 (Proposed Action and Preferred Alternative)</b>
<b>Wilderness</b>	<ul style="list-style-type: none"> <li>No direct impacts.</li> </ul>	<ul style="list-style-type: none"> <li>The Untrammeled, Natural, Undeveloped, and Solitude and Primitive and Unconfined Recreation qualities of wilderness character would be diminished.</li> <li>Visual, esthetic, and audible impacts would occur in wilderness areas from the presence of ORVs and the noise that they generate.</li> </ul>
<b>Soils</b>	<ul style="list-style-type: none"> <li>No direct impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 2.2 acres of soils would be modified, compacted, or otherwise altered to establish an ORV trail.</li> </ul>
<b>Vegetation</b>	<ul style="list-style-type: none"> <li>No direct impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 3.0 acres of vegetation would be cleared to establish an ORV trail.</li> </ul>
<b>Wildlife</b>	<ul style="list-style-type: none"> <li>No direct impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Brown bears and other wildlife species would be disturbed and displaced by construction and ongoing human activities related to the ORV trail.</li> <li>Wildlife that occur within the RWCA corridor would experience habitat fragmentation and loss.</li> <li>Negative bear/human interactions are likely to increase as area use increases to levels not experienced prior to the RWCA.</li> <li>Raptors, ground nesting birds, and songbirds may be impacted by trail construction and maintenance activities, ongoing ORV use, and removal of trees and other vegetation in the RWCA corridor.</li> <li>Increased access to Headwaters Creek could result in increased fishing pressure on the creek and could be detrimental to fish and fish habitat.</li> </ul>

**Cumulative Impacts**

The discussion of cumulative effects considers past, present, and reasonable foreseeable future actions as they relate to the proposed action and alternatives.

**Past Actions**

In the 1960s, the land parcels adjacent to Olga Lake and Headwaters Creek were native allotments awarded to Olga Malone through the Alaska Native Allotment Act of 1906. After Olga's passing, the

heirs to her estate transferred the allotment from Alaska Native ownership and federal trust to the current inholders. The most recent government evaluation of KATM-04-136 and KATM-04-137 took place at the time of the sale/transfer of the parcels by the Bureau of Indian Affairs (BIA) in accordance with the National Historic Preservation Act Section 106.

### ***Present Actions***

Presently the Headwaters Creek area is used as a destination fishing location for anglers desiring a backcountry fishing experience. Anglers are flown in to Olga Lake and travel on foot to Headwaters Creek where they fish for salmon, rainbow trout, and other species. These expeditions are typically day trip excursion and anglers return to Olga Lake for pickup and return to area lodges or King Salmon at the end of the day.

The NPS engages in inventory and monitoring of natural systems in this area to better understand the biological composition and functioning of the park. Several locations in this area are actively used for this purpose, with biologists visiting and investigating the sites on a regular and recurring basis, often annually but sometimes every two to three years.

### ***Reasonably Foreseeable Future Actions***

Within the Olga Lake and Headwaters Creek area of the park, it is reasonably foreseeable that the NPS would increase their presence and operations in this area, particularly to evaluate the state of the ORV trail and to monitor for the establishment of invasive plant species and impacts to wildlife. The Park would conduct aerial fly over operations and on the ground survey and evaluations of NPS lands impacted by the ORV trail following issuance of the RWCA.

### ***Conclusion***

The proposed action would result in direct impacts to approximately 3.0 acres of vegetation and 2.2 acres of soils. Negative human/wildlife interactions would potentially increase in this area due to the increase in human activity. Additionally, wildlife may become disturbed and displaced from habitat located within or adjacent to the RWCA corridor.

The wilderness character of this area would become degraded by the construction, maintenance, and use of an ORV trail. This would result in direct impacts to approximately 3.0 acres of wilderness of which Katmai National Park and Preserve has approximately 3.9 million acres. Indirect impacts to wilderness would be much greater and would extend to the maximum visual and audible distances from the project area. Visitors to the Katmai wilderness in this area who are seeking to experience an untrammeled area, containing a natural setting, undeveloped lands, and opportunities for solitude and primitive and unconfined recreation would be adversely affected by the presence and operation of an ORV trail.

Human presence in the Olga Lake and Headwaters creek area of the park would increase from current levels. The construction of an ORV trail and potential future accommodations within this area of the park would likely result in occupancy throughout the operational season (May – September).

As human activity increases in this area the impacts associated with habitat fragmentation and the displacement of wildlife are likely to persist for the life of the trail.

NPS monitoring in this area is likely to continue at increased levels. Current levels of monitoring of natural systems and biological composition are anticipated to continue. Additional monitoring activities by NPS for invasive plant species and wildlife communities, as well as periodic examination of the access trail condition are likely to be implemented and to persist for the foreseeable future.

## 8 Consultation and Coordination

### Tribal and Alaska Native Corporation Consultation

- Letter sent to Alaska Native Tribes and Alaska Native Corporations on 11/01/2018 informing about the project details and offering Government to Government consultation should they find it necessary.
- Follow up calls with Alaska Native Tribes and Alaska Native Corporations between 11/15/2018 – 02/15/2019 to discuss the project and determine if formal consultation was requested.

### USFWS Section 7

- Informal consultation with the U.S. Fish and Wildlife Service through the IPAC system 02/20/2019 was initiated to determine if threatened and endangered species occur within the proposed project area. No species were identified and a formal Biological Assessment was not prepared for this project.

## 9 References

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# **Appendix A: Subsistence Evaluation: Alaska National Interest Land Conservation Act Section 810 Summary Evaluations and Findings**

## **I. INTRODUCTION**

This section was prepared to comply with Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). It summarizes the evaluation of potential restrictions to subsistence uses that could result from the proposed action by the National Park Service (NPS) to issue a Right-of-Way Certificate of Access to a private inholder within Katmai National Park and Preserve.

## **II. THE EVALUATION PROCESS**

Section 810(a) states:

“In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands...the head of the federal agency...over such lands...shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency—

(1) gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to Section 805;

(2) gives notice of, and holds, a hearing in the vicinity of the area involved; and

(3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.”

A proclamation by President Woodrow Wilson in 1918 created Katmai National Monument from a reservation of approximately 1,700 square miles. Three major purposes of the monument designation were 1) to preserve an area important to the study of volcanism, 2) to preserve the Valley of Ten Thousand Smokes and 3) to conserve an area potentially popular with persons seeking unique scenery and for those with scientific interest. Increased in 1931 to include Brooks Lake, Grosvenor Lake, Lake Colville, and part of Naknek Lake, again in 1942 to include offshore islands within five miles of the monument coastline, and again in 1969 to include the remainder of Naknek Lake, the monument grew to contain 4,361 square miles.

With the passage of ANILCA in 1980, the designation of 3.7 million acres of the monument was changed to a national park, and an additional 308,000 acres was included as a national preserve. Furthermore, 3.4 million acres of the park and preserve were designated as wilderness. The Katmai Preserve was created by ANILCA Section 202(2) for the following purposes (among others):

“...to protect habitats for, and populations of, fish and wildlife including, but not limited to, high concentrations of brown/grizzly bears and their denning areas; to maintain unimpaired the water habitat for significant salmon populations; and to protect scenic, geological, cultural and recreational features.”

The taking of fish and wildlife for subsistence uses is allowed by ANILCA within Katmai National Preserve pursuant to Section 203, however, subsistence activities are not authorized within Katmai National Park.

The potential for significant restriction of subsistence uses must be evaluated for the proposed action’s effect on “...subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.” (Section 810(a), ANILCA).

### **III. PROPOSED ACTION ON FEDERAL LANDS**

#### ***Alternative 1 – No Action (Existing Conditions)***

Under Alternative 1, an ORV trail providing access to KATM 04-136 would not be permitted. Access to the inholding would continue by routes and methods determined by the inholder with no formal agreement with the NPS. The route, method, or terms and conditions of access would not be developed. The area would remain closed to ORV use and no formal trail would be developed through designated wilderness. There would be no additional impacts to vegetation, wildlife, or soils in the proposed project area related to the issuance of the RWCA

#### ***Alternative 2 – Issue RWCA Authorizing ORV Trail and Use from KATM-04-137 to KATM 04-136 (Proposed Action and Preferred Alternative)***

The NPS is considering issuing a Right-of-Way Certificate of Access to a private inholder within Katmai National Park. The proposed action would include two main components:

- 1) Issue a Right-of-Way Certificate of Access to a private inholder to facilitate access to their land within Katmai National Park; and
- 2) Authorize the construction, use, and maintenance of an ORV trail as a means to access the inholding. The ORV trail would be approximately 3 and ½ miles in length and would connect KATM-04-137 adjacent to Olga Lake to KATM-04-136 adjacent to Headwaters Creek southwest of Lake Brooks.

Alternatives 1 and 2 are described in detail in the Environmental Assessment (EA). This project occurs within Katmai National Park which is closed to Title VIII subsistence uses.



#### **IV. AFFECTED ENVIRONMENT**

ANILCA authorizes subsistence uses within Katmai National Preserve, the Alagnak Wild River, and on adjacent federal public lands managed by the BLM and the USFWS. Becharof National Wildlife Refuge shares a common boundary with the park. The area's primary subsistence resources include sockeye salmon, silver salmon, whitefish, pike, rainbow trout, moose, caribou, brown bear, ptarmigan, snowshoe hare, furbearing animals, berries and various wild plants.

The proposed project would occur within the Olga Lake and Headwaters Creek area approximately 13 miles southwest of Lake Brooks in Katmai National Park. Lands within Katmai National Park are closed to subsistence uses. The proposed project is not expected to significantly restrict subsistence uses in Katmai National Preserve or any other federal lands adjacent to Katmai National Park where Title VIII subsistence is authorized.

#### **V. SUBSISTENCE USES AND NEEDS EVALUATION**

To determine the potential impact on existing subsistence activities, three evaluation criteria were analyzed relative to existing subsistence resources that could be impacted. The evaluation criteria are:

- the potential to reduce important subsistence fish and wildlife populations by (a) reductions in abundance; (b) redistribution of subsistence resources; or (c) habitat losses;
- the effect the action might have on subsistence fishermen or hunter access;
- the potential for the action to increase fisherman or hunter competition for subsistence resources.

##### **1) The potential to reduce populations:**

There would be no significant reductions in populations of subsistence fish and wildlife resources as a result of the proposed action to issue a Right-of-Way Certificate of Access to a private inholder. There is no Title VIII subsistence use authorized in the proposed area and the proposed project should have no effect on fish, moose, bear, or small game populations occurring on Katmai National Preserve lands or adjacent federally managed lands.

##### **2) Restriction of Access:**

The proposed action to issue a Right-of-Way Certificate of Access to a private inholder is not expected to limit or significantly restrict the access of subsistence users to natural resources within Katmai National Preserve or any other federal lands adjacent to Katmai National Park where Title VIII subsistence is authorized.

##### **3) Increase in Competition:**

The proposed action to issue a Right-of-Way Certificate of Access to a private inholder is not expected to result in increased competition for fish, wildlife, or other resources that would significantly restrict subsistence users.

## **VI. AVAILABILITY OF OTHER LANDS**

The proposed project is site-specific to the Olga Lake and Headwaters Creek area southwest of Lake Brooks due to the location of the private inholding (KATM 04-136) within Katmai National Park. It is determined that no other federally managed lands would be suitable for this project.

## **VII. ALTERNATIVES CONSIDERED**

Two alternatives were analyzed for this project and are described in detail in the Environmental Assessment (EA). Both of the alternatives occur within the same area of Katmai National Park in an area where Title VIII subsistence uses are not authorized. Neither of the two alternatives proposed would significantly restrict subsistence uses in Katmai National Preserve or any other adjacent federally managed lands.

## **VIII. FINDINGS**

This analysis concludes that the proposed action would not result in a significant restriction of subsistence uses.