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National Park Service  
U.S. Department of the Interior

Alaska Regional Office  
Anchorage, Alaska

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# **Wildlife Harvest On National Park System Preserves In Alaska**

*Environmental Assessment*  
*September 2014*

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## **Note to Reviewers**

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AAC	Alaska Administrative Code
ADFG	Alaska Department of Fish and Game
ANILCA	Alaska National Interest Lands Conservation Act of 1980
AS	Alaska Statute
BOG	Board of Game
C&T	customary and traditional
CE	Categorical Exclusion
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	Environmental Impact Statement
GMU	Game Management Unit
IM	Intensive Management
NEPA	National Environmental Policy Act of 1969
NPS	National Park Service
PC	Predator Control
PL	Public Law
RAC	Regional Advisory Council
USFWS	United States Fish and Wildlife Service

## **1.0 PURPOSE & NEED**

### **1.1 Purpose of and Need for Action**

The National Park Service (NPS) is considering amending regulations for taking wildlife for sport purposes and for trapping in National Park System areas in Alaska. The purpose of this action is to eliminate the adverse impacts associated with Alaska Board of Game harvest regulations that are inconsistent with federal laws and policies intended to protect the resources and values of the National Park System in Alaska. This action is proposed to provide long-term resource protection and to provide certainty to the public regarding hunting in National Preserves in Alaska. The proposed rule would (i) prohibit taking of wildlife, hunting or trapping activities, or management involving predator reduction efforts with the intent or potential to alter or manipulate natural predator-prey dynamics and associated natural ecological processes to increase harvest of ungulates, and (ii) maintain long-standing prohibited sport hunting practices.

The Alaska National Interest Lands Conservation Act (ANILCA) authorizes taking of wildlife for sport hunting and trapping in Preserves under adopted state regulations as well as for subsistence purposes by local rural residents in most NPS areas under federal regulations. This rule would not change regulation of federal subsistence uses of National Park System areas in Alaska. ANILCA provides the NPS authority to restrict taking wildlife for sport purposes for reasons of public safety, administration, floral and faunal protection, or public use and enjoyment (ANILCA § 1313).

This proposed rule responds to recent changes to state wildlife harvest regulations that allow liberalized methods of hunting and trapping wildlife and extended seasons to increase opportunities to harvest predator species, which conflict with the mandates for National Park System Preserves<sup>1</sup>. The State of Alaska (SOA) framework for managing wildlife in Alaska is based on sustained yield, which is defined in state statute to mean “the achievement and maintenance in perpetuity of the ability to support a high level of human harvest ... (AS § 16.05.255(k)(5)).” Some recent state regulations implementing the sustained yield statute are intended or reasonably likely to manipulate natural systems and processes to achieve a high level of harvest by humans. These state regulations conflict with laws and policies applicable to NPS areas that require preserving naturally functioning ecosystems and processes, including natural abundance and diversity of native wildlife populations.

This EA evaluates the action and the no-action alternatives and considers potential environmental impacts on wildlife populations and habitat; federally authorized subsistence uses including hunting, trapping, and fishing; public uses and enjoyment; and wilderness character. Several other alternatives were considered but dismissed from detailed analysis. The alternatives dismissed and reasons for dismissal are included in chapter 2. Proposed regulations are available for concurrent public review at [www.regulations.gov](http://www.regulations.gov). This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and regulations of the Council on

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<sup>1</sup> The Alagnak National Wild River corridor is adjacent to Katmai National Preserve and managed similarly by NPS.

Environmental Quality (40 CFR 1508.9), and NPS Director's Orders #12: Conservation Planning, Environmental Impact Analysis, and Decision-making.

### 1.1.1 Background

The NPS relies on three basic laws for the management of National Park System areas in Alaska; the NPS Organic Act of 1916 as amended by the NPS General Authorities Act of 1970 and the Redwoods Act (1978), and ANILCA. The NPS Organic Act states: "The NPS shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations ... to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

In the General Authorities Act as amended by the Redwood Act, Congress declared a national park system composed individually and collectively of these areas to be "preserved and managed for the benefit and inspiration of all the people of the United States; . . . and the protection, management, and administration of these areas shall be conducted in the light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which the various areas have been established[.]"

In passing ANILCA, Congress recognized "certain lands and waters in the State of Alaska contain nationally significant natural, scenic, ... wilderness, cultural, recreational, and wildlife values...." (ANILCA, Pub. L. 96-487, Dec. 2 1980, Sec. 101(a)). ANILCA Section 101(b) states in part: "It is the intent of Congress in this Act to . . . provide for the maintenance of sound populations of, and habitat for, wildlife species of inestimable value to the citizens of Alaska and the Nation, . . . to preserve in their natural state extensive unaltered arctic tundra, boreal forest, and coastal rainforest ecosystems; . . . and to preserve wilderness resource values and related recreational opportunities including but not limited to hiking, canoeing, fishing, and sport hunting, within large arctic and subarctic wildlands, . . . and to maintain opportunities for scientific research and undisturbed ecosystems."

ANILCA directs the Secretary of Interior, through the NPS, to administer Alaska NPS units in accordance with the NPS Organic Act as amended (ANILCA 201, 203) and specifically provides that national preserves are to be managed in the same manner as national parks with the exception that sport hunting and trapping are allowed (ANILCA, sec. 1313). Title II of ANILCA describes the key purposes and values for each area established under the Act (see Appendix A, II Evaluation Process) and identified species addressed in these regulations whose habitat and populations shall be protected.

NPS Management Policies of 2006 interpret the NPS Organic Act as amended and the policies provide direction to NPS managers on implementing the Organic Act. Section 4.4.1 of NPS Management Policies describes general principles the NPS follows to manage biological resources, including: "Preserving and restoring the natural abundances, diversities, dynamics, distributions, habitats, and behaviors of native plants and animal populations and the communities and ecosystems in which they occur; and minimizing human impacts on native

plants, animals, populations, communities, and ecosystems, and the processes that sustain them.” Section 4.4.3 specifically states: “The Service does not engage in activities to reduce the numbers of native species for the purpose of increasing the numbers of harvested species (i.e., predator control), nor does the Service permit others to do so on lands managed by the National Park Service.”

Prior to the passage of ANILCA, the Senate Committee on Energy and Natural Resources stated “[i]t is contrary to the National Park Service concept to manipulate habitat or populations to achieve maximum utilization of natural resources. Rather, the National Park System concept requires implementation of management policies which strive to maintain natural abundance, behavior, diversity and ecological integrity of native animals as part of their ecosystem, and that concept should be maintained” (Alaska National Interest Lands, Report of the Senate Committee on Energy and Natural Resources, Report No. 96-413 at page 171).

In the last several years, the SOA has adopted an increasing number of liberalized methods of hunting and trapping wildlife and extended seasons to increase opportunities to harvest predator species. Following are predator harvest practices recently authorized on lands in the state, including several National Preserves:

- hunting black bears, including sows with cubs, with artificial light at den sites;
- harvesting brown bears over bait (which often includes dog food, bacon/meat grease, donuts, and other human foods); and
- taking wolves and coyotes (including pups) during the denning season when their pelts have little trophy, economic, or subsistence value.

These state authorized harvest practices conflict with the legal and policy framework (discussed above) for NPS managed lands, which call for managing for natural systems and processes, including natural abundance and diversity of native wildlife populations, while minimizing human impacts. ANILCA provides the NPS, through the Secretary of the Interior, authority to restrict taking wildlife for sport purposes for reasons of public safety, administration, floral and faunal protection, or public use and enjoyment (ANILCA § 1313). While the NPS prefers a state solution to these conflicts, the SOA has not been willing to exclude NPS Preserves from these harvest practices. In response to the state authorizations listed above, the NPS adopted temporary restrictions that prohibit harvest under these state regulations in NPS Preserves (36 CFR 13.40 and 13.50). Rulemaking is required to make these restrictions permanent (36 CFR 13.50).

Although NPS Categorical Exclusion 3.4 A.8 (promulgation of new regulations for NPS-administered areas) applies, the NPS has prepared this Environmental Assessment (EA) in order to inform agency decision-making pursuant to 40 CFR 1501.3(b) and to fully disclose any potential for environmental effects.

## 1.2 Impact Topics Selected for Analysis

Impact topics that could result in measurable or observable effects were selected to analyze and compare the effects of the alternatives. The potential for new NPS regulations to restrict

practices to increase or decrease native wildlife populations for harvest by humans, or lack thereof, could affect the following resources or values in NPS areas in Alaska: wildlife populations and their habitat; subsistence resources and uses; public uses and enjoyment; and wilderness character.

### **1.3 Impact Topics Dismissed from Analysis**

The following impact topics were considered but dismissed from analyses because the alternatives are not likely to have any measureable effects: archeological or historic resources; fish and aquatic habitat; floodplains or wetlands; low income or minority populations; and threatened and endangered species.

### **1.4 Actions Needed for Implementation**

NPS will schedule consultation with the State of Alaska before hunting restrictions are adopted for NPS-managed national preserves in Alaska. Proposed and final regulations will be published in the Federal Register and the public will be provided a minimum of 60 days to comment, including notifications in news media and public hearings, as required.



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## 2.0 DESCRIPTION OF THE ALTERNATIVES

### 2.1 Alternative A - No Action (Adopt All SOA Wildlife Harvest Regulations in National Preserves)

Under the no-action alternative, all SOA laws and regulations that do not conflict with existing federal laws or regulations would apply on national preserves. Additionally, the NPS would take no action to prohibit implementation of the State's intensive management regulations and liberalized predator harvest measures on NPS preserves. Because the no-action alternative is not consistent with the NPS statutory framework and NPS policy, in the last few years the NPS has prevented certain recent State regulations from taking effect in preserves through yearly restrictions. NPS temporary restrictions, however, are not meant to be applied year after year in perpetuity. To better disclose the effects of the NPS action alternative, the no-action alternative describes what would occur if NPS did not take any action to prohibit incompatible state intensive management wildlife regulations.

Wildlife harvest measures that would occur under the no-action alternative include, but are not limited to, the following examples:

- i) Taking of black bear with artificial lights at den sites;
- ii) Taking of black bear cubs and sows with cubs;
- ii) Taking brown bears over black bear bait stations;
- iv) Taking wolves or coyotes during the denning season;
- v) Using electronic devices specifically authorized by the State; and
- vi) Take of caribou while the animal is swimming in certain national preserves.

### 2.2 Alternative B – Promulgate NPS Wildlife Harvest Regulations in Alaska National Preserves (*NPS Preferred*)

Historically illegal harvest practices and activities or management actions involving predator reduction efforts with the intent or potential to alter or manipulate natural predator-prey dynamics and associated natural ecological processes to increase harvest of ungulates that are inconsistent with the laws and policies applicable to NPS areas would not be allowed. The proposed rule would also maintain prohibitions on historically illegal practices on NPS lands under NPS regulations, as outlined in the proposed rule in [www.regulations.gov](http://www.regulations.gov). Examples of these are described in the list under the no-action alternative. Under the proposed rule, the regional director would compile a list updated at least annually of activities prohibited. Notice would be provided in accordance with 36 CFR 13.50(e).

The proposed rule would also prohibit use of electronic devices not specifically identified as authorized and eliminate an allowance under adopted state laws that authorize sport hunters to take caribou while swimming in certain national preserves.

This alternative also examines the possible effects of prohibiting baiting of any bears, including black bears, in national preserves. When the NPS adopted the temporary restrictions on taking brown bears over bait in preserves in 2013, the Service received several comments suggesting black bear baiting be prohibited as well. Unlike the practice of taking brown bears over bait, black bear baiting has been an authorized practice in Alaska for several decades, including in national preserves. This option considers disallowing the use of bait as defined to hunt black bears, which is currently authorized by the State of Alaska pursuant to a permit. After considering public comments, the NPS may decide to allow the continued use of bait to hunt black bears or make other adjustments to the practice on national preserves.

### **2.3 Environmentally Preferable Alternative**

The action alternative (Alternative B-Promulgate NPS Wildlife Harvest Regulations in Alaska National Preserves) would be the environmentally preferable alternative because it would cause the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources (43 CFR 46.30). Means of take that conflict with NPS mandates to manage for natural ecosystems, processes, and populations (including behaviors) would continue to be prohibited in the long term rather than being subject to annual, temporary closures. Natural processes would be allowed to continue, including the perpetuation of naturally functioning populations of predators and prey in their ecosystems.

### **2.4 Alternatives Considered but Eliminated from Detailed Study**

#### 2.4.1 Continue Temporary Restrictions of Wildlife Harvest on National Preserves in Alaska

The NPS has adopted several temporary restrictions since 2010, which have limited certain harvest practices that are inconsistent with NPS laws and policies. This alternative would continue such restrictions and have impacts very similar to the action alternative (Alternative B). Also, under NPS regulations, rulemaking is required to make these restrictions permanent (36 CFR 13.50). The record of continued temporary restriction shows a need to find a permanent solution. This alternative is unreasonable because it is costly to the taxpayer, expensive in terms of personnel time and travel, confusing to visitors desiring to hunt in National Preserves, and does not provide a long-term solution to the issue identified in the purpose and need.

#### 2.4.2 Prohibit State Harvest Methods Unless Specifically Authorized in NPS Areas

This alternative would specify exactly what hunting methods and means would be allowed in NPS areas in Alaska. It would likely be more restrictive with regards to hunting methods than is now the case. The NPS believes this approach is not consistent with ANILCA, which provides the State establishes hunting and trapping regulations, including in national preserves, except where they may conflict with NPS laws and regulations and can be restricted pursuant to ANILCA Section 1313.

#### 2.4.3 Allow Continued Black Bear Baiting, but Not Taking Brown Bears Over Bait

Black bear baiting has been authorized in preserves since at least the 1980s, and under this alternative, the NPS would allow this hunting practice to continue. This is a minor permutation of wildlife harvest restrictions that are encompassed within the scope of the alternatives. Therefore, a separate sub-alternative focused solely on prohibiting take of black bears over bait is not warranted.

#### 2.4.4 Request the Alaska BOG to Not Implement Liberalized Predator Harvest on National Preserves

While the NPS prefers this solution to these conflicts, the SOA has been mostly unwilling to exclude NPS preserves from these harvest practices. In doing so, the BOG has told the NPS to use its own procedures (restrictions and rulemaking) to limit these practices in national preserves since the concern is based on federal law and policy. Because of the BOG position, this alternative is not likely to be implemented by the BOG, and may not achieve consistency with NPS laws and policies.

**Table 1. Summary Description of the Alternatives**

<b>Elements \ Alternatives</b>	<b>Alternative A – No-Action (<i>Adopt All SOA Wildlife Harvest Regulations in National Preserves</i>)</b>	<b>Alternative B – NPS Action (<i>Promulgate NPS Wildlife Harvest Regulations in Alaska National Preserves</i>)</b>
<b>Intensive Management</b>	SOA intensive management objectives apply on national preserves including identification of ungulate (prey) populations to be managed for maximum sustained human harvest.	SOA intensive management objectives do not apply on national preserves and wildlife populations are managed for natural conditions. NPS areas are not managed for elevated ungulate populations and high levels of harvest by humans.
<b>Liberal Predator Harvest</b>	<ul style="list-style-type: none"> <li>• Includes take of black bear with artificial lights at den sites</li> <li>• Take of black bear sows with cubs and cubs;</li> <li>• Brown bears may be taken over bait at black bear bait stations</li> <li>• Lengthens harvest season for wolves and coyotes to include denning season.</li> <li>• Authorizes take of big game while animal is swimming in certain national preserves</li> </ul>	Liberalized predator harvest seasons and methods are not allowed on national preserves. Baiting of brown bears would be disallowed and baiting of black bears could also be disallowed to reduce conditioning of all bears to human foods.

**Table 2. Summary Impacts of the Alternatives**

\ Alternatives Elements \	Alternative A – No-Action ( <i>Adopt All SOA Wildlife Harvest Regulations in National Preserves</i> )	Alternative B – NPS Action ( <i>Promulgate NPS Wildlife Harvest Regulations in National Preserves</i> )
<b>Wildlife &amp; Habitat</b>	Localized effects on individual predators, family groups, and packs are expected to be substantial. Reductions in predator populations may occur over the long term from SOA intensive management and liberalized predator harvest regulations. Prey populations may increase accordingly, depending on the level of habitat and recruitment effects from climate trends and wildland fires. Habitat conditions could decline due to overbrowsing or overgrazing by ungulates. Increased probability of conditioning bears to human foods at bait stations could result in an increase in take of bears in defense of life and property.	Existing predator harvest opportunities would not change, with the exception of baiting for black bears, which could be discontinued, leading to little or no change in black bear or other wildlife populations and habitat. Take of bears conditioned to human foods in defense of life and property may be reduced slightly. Prey populations would continue to be maintained consistent with full compliments of predator populations. Climate change and wildland fire would continue to alter habitat over broad areas.

<b>Subsistence</b>	Possible increased opportunities for both federally qualified subsistence users (and sport hunters) to take moose and caribou in national preserves in Alaska. Increased competition in some areas between rural and non-rural hunters could result in decreased opportunity for rural hunters who typically have older and less sophisticated equipment and fewer airplanes. In some areas, wolf and possibly bear numbers could be reduced such that sport hunting and federally authorized (ANILCA Title VIII) subsistence hunting and trapping of these species could be restricted or eliminated until populations rebound.	There would be little to no effect of NPS wildlife harvest restrictions on federal subsistence harvests in national preserves. Because future black bear sport harvest effort is unpredictable, elimination of bear baiting for sport purposes could result in a small effect on federal subsistence harvest opportunities. See Appendix B for ANILCA 810 Evaluation and Findings on effects to subsistence.
<b>Public Uses &amp; Enjoyment</b>	Possible increased opportunities for sport hunters to take bears, wolves, coyotes, moose, and caribou in national preserves in Alaska. Opportunities for scientific study and viewing of natural populations of bears, wolves, and coyotes could be reduced. Signed areas with bear bait stations could increase in number and discourage other visitors from using those areas and increase the potential for food-conditioned bears and visitor safety issues.	Long-standing opportunities for visitors to engage in sport hunting of predator species in national preserves would be maintained with the possible exception of a minor reduction in black bear harvest over bait. Scientific study and visitor observations of natural predator and prey relations and habitat conditions would be maintained. Removal of bear baiting stations would reduce the conditioning of bears to human foods and improve visitor safety and use of national preserve lands.
<b>Wilderness Character</b>	Some long term negative impacts to wilderness character could result from liberalized predator harvest and potential increases in prey populations could lead to degraded natural and untrammelled qualities.	Existing wilderness character, including natural and, untrammelled qualities would be preserved throughout national preserves in Alaska.

### **3.0 ENVIRONMENTAL CONSEQUENCES**

#### **3.1 Project Area**

The study area where the proposed regulations would take affect is limited to the 10 national preserve units in Alaska (including the Alagnak Wild River corridor adjacent to Katmai National Preserve) as shown in Figure 1 and listed in Table 3, totaling approximately 20 million acres. Table 3 summarizes the approximate preserve sizes, including acreage of designated and eligible wilderness, and some of the key species identified in ANILCA Title II for protection in these areas (See Appendix A, Part II).

#### **3.2 Impacts on Wildlife and Habitat**

##### 3.2.1 Current General Conditions of Wildlife and Habitat

Large intact ecosystems, complete with large predators, are present throughout national preserves in Alaska. Title II of ANILCA mandates NPS “to protect habitat for and populations of, fish and wildlife, including but not limited to...” and names key species. In general the fish and wildlife populations are healthy and fluctuate within the limits of natural variation. Wildlife populations can change for a variety of reasons, including interactions between nutrition, weather, predator-prey relationships, and human harvest. These fluctuations have been occurring for thousands of years and it is the mandate of the NPS to allow these natural processes to continue while still allowing for limited human harvest.

Relative to wildlife and habitat, national preserves in Alaska are to be managed for the maintenance of natural ecosystems, processes, and wildlife populations (including behaviors). These mandates have largely been met in Alaska national preserves. Sport and subsistence harvest of wildlife are allowed uses in national preserves in Alaska and are governed by a combination of state, federal, and NPS authorizations (see Hilderbrand et al. 2013a for a review of Wildlife Stewardship on NPS Lands in Alaska). Until recently, most harvest activities were managed compatibly with both the State of Alaska’s sustained yield principle and NPS mandates to maintain natural processes and wildlife populations. Although recent SOA liberalized predator harvest included areas in national preserves, the NPS has prevented these activities through annual temporary restrictions since 2010.

The exception is the authorization for the harvest of black bears over bait. State regulations prohibit setting up a bait station to take black bears within a mile of a home or other dwelling, business, campground and other places. State regulations also prohibit setting up a bait station within a quarter mile of a road or trail. Naturally occurring items as well as human foods can be used as bait. While the harvest of black bears over bait has been legal on NPS preserves in Alaska since the 1980s, harvest has been low (<2 bears/year) during the period 1992-2010 and

**Table 3. Summary of ANILCA National Preserve Areas, Wilderness Areas, & Presence of Key Wildlife Species**

<b>NPS AREAS/ Area Acres, Wilderness Acres, &amp; Presence of Key Species</b>	Aniakchak National Preserve	Bering Land Bridge National Preserve	Denali National Preserve	Gates of the Arctic National Preserve	Glacier Bay National Preserve	Katmai National Preserve (includes Alagnak Wild River)	Lake Clark National Preserve	Noatak National Preserve	Wrangell- Saint Elias National Preserve	Yukon- Charley Rivers National Preserve
Acres	458,124	2,632,522	1,304,242	948,203	58,406	359,819	1,294,116	6,548,727	4,306,002	2,236,875
Designated Wilderness <sup>1</sup>	0	0	0	0	0	60,000	348,000	5,821,000	1,866,000	0
Eligible Wilderness <sup>1</sup>	TBD	2,509,360	TBD	914,000	100	268,000	903,000	759,000	2,249,000	1,815,000
Wolves	✓	X	X	X	✓	✓	✓	X	X	X
Brown Bear	X	X	X	X	✓	X	X	X	X	X
Moose	X	X	X	X	✓	✓	✓	X	X	X
Caribou	X	✓	X	X		✓	X	X	X	X
Dall Sheep			X	X			X	X	X	X

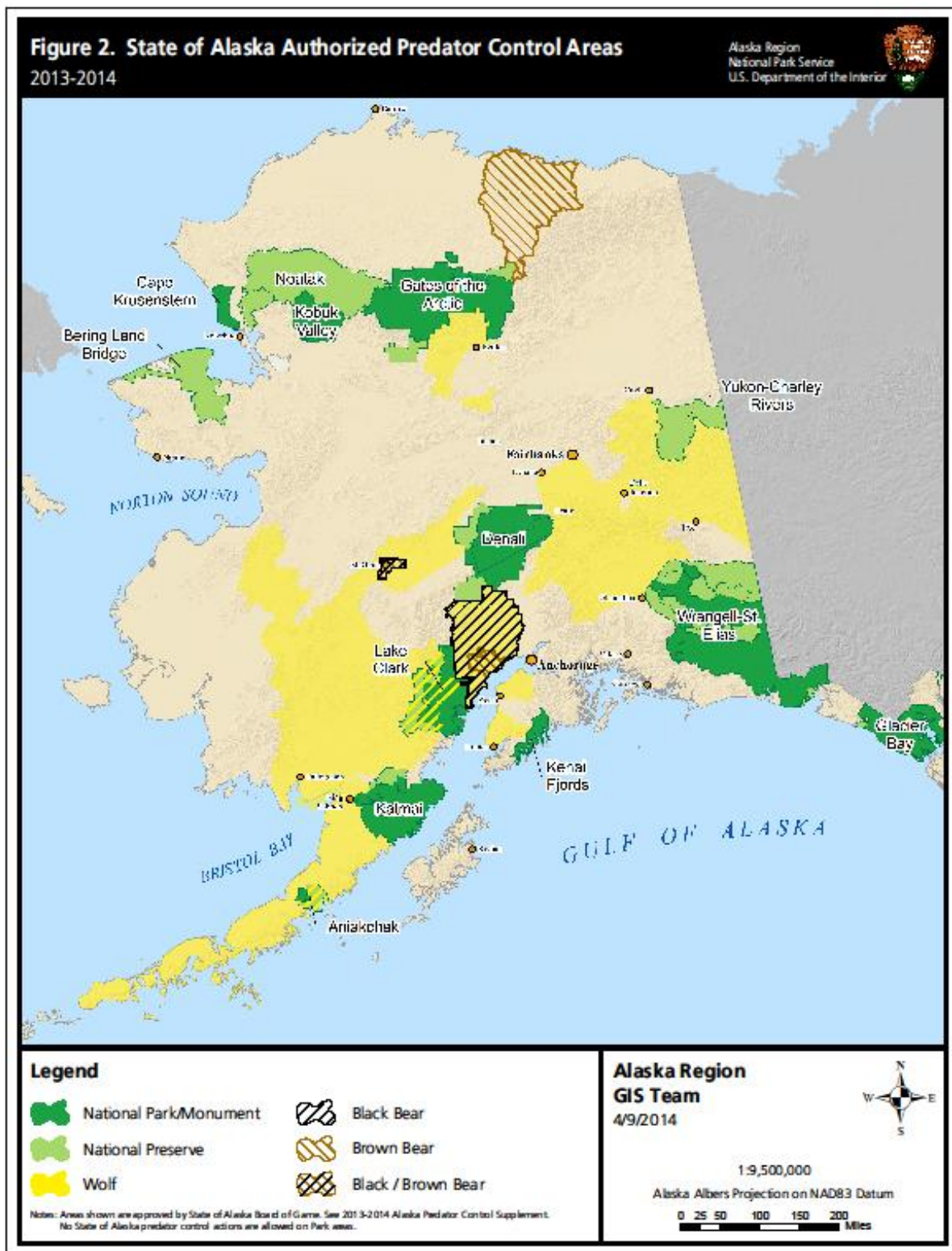
ANILCA Title II specifically identifies protecting habitat for and populations of certain wildlife species, but the Act is not limited to protecting only those species and habitat. Section 701 of ANILCA describes areas designated as wilderness in National Park System units. ANILCA Section 1301 required park area general management plans (GMPs) and ANILCA Section 1317 required wilderness area reviews for suitability or unsuitability, which are included with the GMP documents.

- X means this key species was specifically noted in ANILCA for this area
- ✓ means this species is present in the area, but not highlighted in ANILCA as a key species

<sup>1</sup> Acres are rounded to the nearest 1,000 acres. TBD indicates the acres are yet to be determined for Aniakchak National Preserve. The 100 eligible acres in GLBA Preserve would be contiguous with designated wilderness in the park. Estimated eligible areas for NOAT and YUCH are from the 1986 GMPs and are not yet updated.







largely focused in the McCarthy Road corridor of Wrangell St. Elias National Preserve (Hilderbrand et al. 2013b). From the harvest data reported to the SOA,  $\leq 37$  black bears were hunted over bait in National Preserves, and  $\leq 34$  of these were harvested along the McCarthy Road corridor in Wrangell-St. Elias National Preserve. Of the 37 reported, only three black bears were harvested over bait by rural Alaska residents from NPS preserves between the commencement of federal subsistence regulation in 1992 and 2010 (Hilderbrand et al. 2013b).

### 3.2.2 Effects on Wildlife and Habitat of Alternative A: Adopt All SOA Wildlife Harvest Regulations in National Preserves

Localized effects on individual animals, family groups, and packs may be substantial (e.g., direct mortality, increased mortality risk due to loss of family or group members, and food conditioning). Liberalized predator harvest methods and intensive management are expected to reduce targeted predator species (bears, wolves, and coyotes) and slightly increase ungulate populations (moose and caribou). The harvest of brown bears over bait, harvest of black bear sows and their cubs, and the harvest of wolves and coyotes during the denning and pupping period has long been prohibited. These prohibitions have been in place specifically to prevent steep and long term depression of these predator populations and wanton waste of wolf and coyote hides. A growing body of literature argues for the ecological importance of predators and the effects of changes to predator densities can have on prey, their habitat, soils, and natural processes (Hebblewhite et al. 2005, Frank 2008, Ripple and Beschta 2012). Managed predator reductions to benefit prey can contribute to varied outcomes including increased prey numbers, reduced local habitat quality, signs of nutritional stress in prey, and range shifts. Some of these outcomes have been recently seen in the Forty-Mile Caribou Herd where the herd has doubled in size over the past 10 years. The Forty-Mile Herd is now showing signs of nutritional stress (fewer 3 year old cows are getting pregnant, and lower calf weights). ADF&G biologists are reporting signs of overgrazing in the herd's core range. A high percentage of the herd shifted their winter range much further east into Canada and spent most of the winter there (Boertje et al. 2012).

By design, baiting of bears alters their behavior to increase their predictability and facilitate harvest. This behavioral alteration directly conflicts with NPS policy to maintain natural processes and wildlife populations, including behaviors. Further, conditioning bears to unnatural food items increases the likelihood that the bears will become nuisance bears, and thus be destroyed outside of harvest regulations (Herrero 2002). Similarly food conditioned bears are more likely to become a public safety risk relative to non-food conditioned bears (Herrero 1970, 1976, 2002).

#### Cumulative Effects:

Abundant research has been conducted on myriad of factors affecting bear, wolf, and other carnivore populations. A portion of this body of work is cited below. Climate, fire, harvest, illegal killing, access, habitat fragmentation, and development all have the potential to impact



bears and wolves at the population level across varying temporal scales and have the potential to influence natural ecosystems and processes (Creel and Rotella 2010, Gude et al. 2012, Mace and Waller 1997, McLellan 1990, McLellan et al 1999, McLellan and Shackleton 1988, McLellan and Shackleton 1989, Schwartz et al. 2012, Vucetich et al. 2005).

As predators are one component of a more complex system, effects of other natural events, human management, and/or resource use actions (on the full system and underlying processes) must be considered. For example, events such as wildfires, climate, and severe winters (i.e. deep snows or icing events), can impact habitat quality of ungulates, affect recruitment, and cause direct mortality of individuals (Hegel et al. 2009, Joly et al. 2003, Joly et al. 2009, Joly et al. 2011, Joly et al. 2012, MacCracken and Viereck 1990, Weixelman et al. 1998). These effects contribute to the impacts of predation on ungulates and ungulate numbers, in turn, are linked to prey available for predators (Hegel et al. 2009, Hegel et al. 2010).

Past wildlife habitat fragmentation for bears, wolves, moose, and caribou has occurred in and adjacent to park areas such the Dalton Highway and oil and gas developments on the North Slope, the Red Dog Haul Road through Cape Krusenstern National Monument and near Noatak National Preserve, and the McCarthy and Nabesna Roads in Wrangell-Saint Elias National Preserve. The NPS evaluated the cumulative impacts of mining on wildlife and habitat, among other resources, in environmental impact statements (EISs) for Denali National Park and Preserve, Wrangell-Saint Elias National Park and Preserve, and Yukon-Charley Rivers National Preserve (NPS 1990 a, b, and c). These EISs concluded the potential for adverse effects to certain large wildlife species and their habitat.

The proposed road to the Ambler Mining District near the upper Kobuk River is an example of a foreseeable future impact on wildlife habitat and populations in Gates of the Arctic National Preserve.

Effects outside NPS boundaries and source-sink dynamics are a management concern for carnivores and herbivores alike, particularly on the border of protected areas and areas of less restrictive harvest (Haroldson et al. 2004, Rutledge et al. 2010, Ruth et al. 2011, Salinas et al. 2005, Schwartz et al. 2006a, Schwartz et al. 2006b, Schwartz et al. 2012). Further, when striving to maintain natural processes, some consideration of the effects of designed management perturbations on an entire suite of species, their interactions, trophic cascades, and system stability is necessary (Barber-Meyer et al. 2008, Beschta and Ripple 2010, Evans et al. 2006, Ripple et al. 2014, Ruth et al. 2004).

The effect of the no-action alternative combined with habitat fragmentation and other cumulative impacts could result in more sharply decreased predator populations and slightly increased prey populations, depending on the degree and population effects from habitat changes due to climate, wildland fires, and human harvest levels.

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**Conclusion:**

The no-action alternative is anticipated to result in changes in wildlife populations and habitat, relative to other factors. Localized effects on individual animals, family groups, and packs are expected to be substantial. These changes would be incompatible with NPS mandates to maintain natural ecosystems, processes, and behaviors of affected wildlife, especially bears. This alternative could also result in the feeding and conditioning of wildlife to human foods; and the altered behaviors have the potential to increase the likelihood more bears are taken in defense of life and property.

### 3.2.3 Effects on Wildlife and Habitat of Alternative B: Promulgate NPS Wildlife Harvest Regulations in Alaska

The NPS action alternative would maintain long-standing regulations, most of which prohibited recent predator harvest liberalizations related to methods and means and extended seasons. This alternative is consistent with maintaining existing conditions with naturally functioning ecosystems, complete with natural fluctuations of wildlife populations. Because this alternative also evaluates prohibiting the taking of black bear sows and cubs in dens with artificial lights or the take of black bears (or brown bears) over bait, then fewer bears would likely be harvested under this alternative. Because so few black bears are taken over bait in national preserves, however, this alternative would not substantially change in wildlife harvest and populations and their habitat in these areas. This alternative evaluates removing a source of human-delivered foods to bears and therefore assures bears in national preserves maintain more natural foraging and feeding behaviors. Overall, changes to wildlife populations and their habitats would be regulated by more natural processes and affected less by intentional human actions.

**Cumulative Effects:**

Other effects on wildlife and habitat are expected to be the same under this alternative as described above for the no-action alternative, but the additive impacts of the NPS action alternative would result in no measurable additional changes to wildlife populations or habitat. The elimination or restriction of bear baiting would result in more natural and unaltered behaviors of some bears.

**Conclusion:**

The NPS action alternative would allow for the continuation of long-standing predator harvest opportunities, with the possible exception of the harvest of black bears over bait. It is compatible with the maintenance of natural ecosystems, processes, and behaviors of affected wildlife, especially bears. There would be essentially no change in wildlife population levels or numbers and their habitat from current conditions as a result of this action.

### **3.3 Impacts on Subsistence Use**

#### 3.3.1 Current General Conditions of Subsistence Uses and Resources:

ANILCA Title VIII “Subsistence Management and Use” establishes a preference for subsistence uses, including the taking of fish and wildlife for non-wasteful purposes on federal lands in Alaska. When done in accordance with specific criteria, non-subsistence taking of fish and wildlife on federal lands can be and has been restricted. Section 803 defines the term subsistence uses and that definition is incorporated here by reference. As noted in chapter 1, subsistence hunting and trapping are allowed on national preserves pursuant to ANILCA sections 203 and 1313. Federal regulations at 50 CFR Part 100, 36 CFR Part 242 and 36 CFR Part 13 for NPS areas describe allowable federal subsistence activities on national preserves and other areas. For the most part, federal subsistence regulations promulgated in the 1990s were based upon SOA harvest methods and means, seasons, and harvest limits. These regulations included the use of bait to hunt black bear. Subsistence and sport hunting have generally co-existed in national preserves since ANILCA. To satisfy the ANILCA Section 804 priority the Federal Subsistence Board has approximately 15 current sport hunting restrictions in preserves, which are subject to changes or additions during each regulatory cycle.

#### 3.3.2 Effects on Subsistence of Alternative A: Adopt All SOA Wildlife Harvest Regulations in National Preserves

Both State sport hunting and trapping (see AAC 92.113 (b)(7)(iii)(D)) and Federal subsistence hunting and trapping opportunities on predator species could be diminished. Diminishing predators is intended to result in increases in prey populations, such as moose and caribou. In some areas, depending on the effectiveness of the management actions, habitat conditions, and the nature of the State’s liberalized hunting regulations, moose and caribou numbers might increase (see Hegel et. al. 2010) and could be available to federally qualified subsistence users (hunters).

Federally qualified subsistence users might benefit from increased numbers of prey animals that are subsequently available to hunt. Federally qualified subsistence users, when engaging in the customary and traditional practice of taking swimming caribou in certain areas, would compete with sport hunters engaging in the same activity where authorized under both Federal subsistence and state harvest regulations. Local rural subsistence hunters who typically have older and less sophisticated equipment and fewer airplanes (Cellarius and Rabinowitch, pers. comm.), might suffer from increased competition from non-rural hunters who have learned of localized abundances of ungulates. In regards to hunting black bears with the aid of bait (bear baiting) this practice has long been allowed in State and later Federal Subsistence Board regulations. State harvest data, show a very low level of harvest by bear baiting occurring on preserves (< 2 bears/year) and for federally qualified subsistence users only three black bears have been taken over bait in an 18 year period (Hilderbrand, et. al. 2013b). Regarding the more recent allowance for taking brown bear over a bait station established for black bear, a negligible increase in subsistence brown bear take over time is expected. Subsistence hunters and trappers might find

fewer wolves and coyotes available for take with prime pelts if seasons are lengthened into the denning and pupping periods from mid-April to mid-August.

#### Cumulative Effects:

The *Subsistence Management Regulations for Harvest of Wildlife on Federal Public Lands in Alaska* (Federal Subsistence Board 2012-2014) has approximately 15 closures in place affecting harvest of moose, caribou, muskox, and sheep in preserves where the Board has determined restrictions are appropriate to provide the required federal subsistence priority found in ANILCA Section 804. These restrictions will remain in effect until determined unnecessary. Combined with effects from implementing BOG regulations under the no-action alternative, the federal subsistence harvest of ungulates could increase the subsistence take of bears, wolves and coyotes from hunting and trapping could decrease. Other cumulative effects on important subsistence prey resources such as caribou and moose are expected to be similar to those described in the wildlife and habitat section.

#### Conclusion:

The No-Action Alternative could result in increased opportunity for federally qualified subsistence users to take moose and caribou in national preserves if predator harvest liberalizations increase prey populations. It could also randomly increase competition for these prey species in some areas between rural and non-rural hunters and could result in decreased success for local rural hunters. Subsistence opportunities to harvest wolves or coyotes with prime pelts could be diminished where take of these species by sport hunters during denning and pupping seasons is successful. Subsistence harvest of black and brown bears might increase under this alternative where harvest of bears over bait is allowed. In some areas, wolf and possibly bear numbers could be reduced sufficiently so that sport hunting could be restricted or eliminated by the Alaska Board of Game or the Federal Subsistence Board to protect the populations from being decimated and to protect the ANILCA 804 subsistence priority. In extreme cases federally authorized (ANILCA Title VIII) subsistence hunting and trapping of these species could be restricted or eliminated by the Federal Subsistence Board or the NPS until populations recover in affected areas.

#### 3. 3. 3 Effects on Subsistence of Alternative B: Promulgate NPS Wildlife Harvest Regulations in Alaska National Preserves

Opportunities for subsistence harvest of wolves and coyotes with prime pelts would be maintained at ongoing levels. The numbers of moose and caribou harvested for subsistence is expected to be similar to ongoing levels. If predators, weather, and other factors reduce these prey populations (see wildlife section), then harvests may need to be reduced. In the national preserves, sport harvest would be restricted first to protect the ANILCA 804 subsistence priority.

Concerning black bear baiting, federally qualified subsistence hunters have only harvested three black bears over bait in an 18 year period (Hilderbrand, et. al. 2013b). Eliminating sport harvest

of black bears over bait would have a very small effect on subsistence harvest of black bears. In continuing to prohibit hunting brown bear over bait, no change would result in opportunity for subsistence hunters. By disallowing bear baiting for sport hunting, there would be a reduced potential to condition bears to human foods, as it is believed that some black and brown bears are attracted to bait, but not harvested. This could reduce the incidence of nuisance bears to subsistence users at their hunting and fishing camps and in and near their communities where baiting was occurring in the same vicinity.

#### Cumulative Effects:

The *Subsistence Management Regulations for Harvest of Wildlife on Federal Public Lands in Alaska* (Federal Subsistence Board 2012-2014) has approximately 15 closures in place affecting moose, caribou, muskox, and sheep in preserves where the Board has determined restrictions are required to implement the federal subsistence priority found in ANILCA Section 804. These restrictions will remain in effect until determined unnecessary. The additive effects of the NPS action alternative would result in maintaining existing federal subsistence opportunities to hunt or trap wolves and coyotes with prime pelts. With healthy predator populations in park areas, subsistence opportunities to harvest ungulates (moose and caribou) are expected to be unchanged. Predator control efforts adjacent to and outside of NPS-managed areas could draw down predator populations inside park areas, allowing for temporary increases in prey species for subsistence harvest inside park areas. If there are times of ungulate population shortages, then the federal subsistence priority could be implemented under provisions of ANILCA Section 804.

#### Conclusion:

Potential NPS regulations to restrict wildlife take practices would maintain long-standing subsistence harvest opportunities authorized since preserves were established in 1980. Because future black bear harvest effort is unpredictable, elimination of bear baiting for sport hunting could result in a very small increase in opportunity for federal subsistence black bear harvest. The overall effect on federal subsistence wildlife harvest in national preserves in Alaska would change very little compared to the past several decades.

### **3.4 Impacts on Public Uses and Enjoyment**

#### 3.4.1 Past and Current Public Uses and Enjoyment

ANILCA Title II (see Appendix A – ANILCA 810), area General Management Plans (GMPs), and more recent area Foundations Statements describe the public uses and values to be managed for and protected in each preserve area, including the Alagnak Wild River. Preserves are to be managed like national parks, except the taking of wildlife for sport purposes and subsistence uses and trapping shall be allowed under applicable State and Federal law and regulation. Subsistence take of wildlife is allowed in parks and monuments in Alaska where authorized in ANILCA Title



II. Guided sport hunting concessions are offered in all of the preserves except Bering Land Bridge National Preserve.

Most of the park and/or preserve GMPs (NPS 1984 through 1986) describe in more detail the public access and facilities needed to meet public use objectives, and further clarify Congressional intent for public uses. The Denali National Park and Preserve Final Backcountry Management Plan (NPS 2006b) and Foundation Statement (NPS 2013b) further address area management goals and zones for public uses, including for the preserve additions. Other preserve area Foundation Statements (NPS 2009, 2010) articulate primary public uses and objectives, scientific values, and interpretive themes for the various areas.

Visitor use statistics for these areas are available on the web (NPS 2012b). In general, public visitation to the relatively remote and wild preserves is dispersed and low in number, from a few visitors to several thousands of visitors per year, depending on the area and year. Visitor pursuits in these preserves are highest during the summer season for fishing, hunting, wildlife watching, river floating, backpacking, mountain climbing, photography, and scientific study. Smaller numbers of visitors enter these areas during the winter season for skiing, dog mushing, snowmobiling, and other winter use activities, including trapping.

#### 3.4.2 Effects on Public Uses and Enjoyment of Alternative A: Adopt All SOA Wildlife Harvest Regulations in National Preserves

Potential reductions in predator populations from liberalized hunting regulations could result in larger ungulate populations, depending on habitat conditions, and therefore increased opportunities for guided and unguided sport hunters to harvest moose, caribou, and other ungulates. Some hunters could take wolves or coyotes for a longer season through the denning and pupping seasons where authorized. The harvest of brown bear could be increased for sport hunters because these animals could be attracted to and harvested over black bear bait stations. Black bear sows with cubs and cubs could be harvested and with the aid of artificial lights at dens. Non-hunting visitors to these areas could have reduced opportunities to view bears, wolves, and coyotes in their natural habitat if more of these animals are harvested and removed.

Bear bait stations may be used when authorized seasons are open, generally April 15 to June 30 and July 1 to October 15, which can overlap the primary visitor season. There has been a notable increase in demand for bear bait stations in some game management units where the take of brown bears is also allowed at black bear bait stations. For examples: in GMU 12 requests for bear bait stations increased by 78% (from an 11 yr. average of 50 permits to a Spring 2013 request of 89 permits), and in GMU 20E the request increased by 93% (from an 11 yr. average of 12 permits to a Spring 2013 request of 23 permits.) For the most part, adverse impacts to non-hunting visitors are expected to occur during these times. Some visitors would likely avoid signed bear bait station areas because of perceived safety issues and because they would not want to interfere with an authorized hunt situation. Some bears attracted to bait stations but not harvested could become conditioned to human-associated foods and pose a nuisance or threat to

visitors in the area for many years. Food-conditioned bears are more likely to become a public safety risk relative to bears not conditioned to human foods (Herrero 1970, 1976, 2002).

The practice of taking swimming caribou is not expected to affect public use and enjoyment.

Though most non-hunting visitors go to NPS areas in summer, some travel to these areas in early fall, spring, and even during the winter season. Winter season visitors would not likely be affected by most of the SOA proposals except to reduce potential sightings of wolves and coyotes because of the extended harvest seasons and potential increases in harvest of these species. Opportunities to trap furbearers such as wolves and coyotes during traditional seasons when pelts are in prime condition could be reduced from liberalized harvest seasons to take these animals during denning periods. Opportunities to conduct research on or observe un-manipulated populations of predators like bears, wolves, and coyotes and their relationships with other species and the ecosystem functions would be negatively impacted.

#### Cumulative Effects:

Other effects on public uses and enjoyment could result from actions inside and immediately adjacent to national park, monument, and preserve areas. There are several guided commercial activities visitors use for wildland adventures, hunting, and sport fishing trips. There are now 27 hunting guide concessions operating in national preserves, and 16 of those are in Wrangell-Saint Elias National Preserve. Future guided hunting concessions may be offered in Bering Land Bridge National Preserve (NPS 2013a).

ORV trail rerouting and rehabilitation in Wrangell-Saint Elias National Park and Preserve, Glacier Bay National Preserve, and Lake Clark National Park and Preserve have and will improve access for public use and enjoyment of these areas. Visitor access to the Kobuk River unit of Gates of the Arctic National Preserve may be facilitated in the future if a new road is built through the area to the Ambler Mining District and if public access is allowed.

Liberalized harvest methods and seasons on predators such as bears, wolves, and coyotes, inside and outside of preserves could reduce predators occurring inside parks and monuments, resulting over the long-term in a drawdown of natural populations of large predators inside park areas and opportunities to view and study them. An example of a possible drawdown effect on visitor viewing of wildlife has been recently demonstrated in Denali National Park where renewed trapping of wolves immediately north of the old park is correlated with a notable reduction in visitor viewings of wolves along the eastern half of the Denali Park Road (NPS 2013c). The percentages of visitors seeing wolves on bus trips in the area decreased from 44 percent in 2010 to 21 percent in 2011 to 12 percent in 2012 to four percent in 2013 (NPS 2013c).

Combined with the No-Action Alternative, the effects of other impact agents described in the preceding paragraphs on public uses and enjoyment in the preserves (and parks and monuments) could be somewhat beneficial for sport hunting in preserves in the short-term and negative for other public uses and enjoyment of the affected park areas.

#### Conclusion:

The No-Action Alternative could result in the enhancement of some sport hunting opportunities in the preserves in the short-term, most likely for moose and caribou for hunters in those areas. It could also result in alterations or elimination of observations and study opportunities of naturally functioning wildlife populations, including predators like bears, wolves, and coyotes. The avoidance of areas around bear baiting stations by a small number of other recreational visitors could result in a reduction in other public uses and enjoyment of those areas. This alternative would also be incongruent with public messages to avoid the feeding and conditioning of wildlife to human foods; and the altered behaviors of wildlife, bears in particular, have the potential to increase public safety risk.

#### 3.4.3 Effects on Public Use and Enjoyment of Alternative B: Promulgate NPS Wildlife Harvest Regulations in Alaska National Preserves

This alternative would maintain the status quo for sport hunting and other public uses in the preserve areas, except taking black bears over bait could be discontinued. If black bear baiting is discontinued, non-hunting visitors to these preserves would see no bear baiting station signs or be affected by this activity. No black bears or brown bears could be conditioned or habituated to human foods at bait stations, and other visitors may feel safer visiting areas with no bait stations. Sport hunter harvest success of bears, wolves, and coyotes would likely remain largely the same. In national preserves, sport hunter opportunities to harvest prey species like moose and caribou are expected to remain similar to recent past years. Natural populations of wildlife and ecosystem functioning would continue for the foreseeable future, enabling public observation and scientific research of minimally altered ecosystems with a natural distribution and abundance of predators and prey. Preserves would continue to reflect a baseline condition where natural processes are more fully expressed, and these areas would continue to serve as places where wildlife more closely reflect their natural diversities, abundances, and behaviors in undisturbed ecosystems.

#### Cumulative Effects:

The effects on public uses and enjoyment from other impact agents would be the same as described for the no-action alternative. Combined with Alternative B, these effects could result in small reductions in harvest of black bears from preserves (no bear baiting) and maintenance of other public uses and enjoyment to observe and study wildlife in its natural conditions.

#### Conclusion:

Potential NPS harvest regulations to restrict wildlife take practices in Alaska preserves would maintain the longstanding practices in place since 1980, except for the possible elimination of black bear baiting and take of swimming caribou except by Federal subsistence users. No other changes would be likely in sport hunting opportunities in preserves. Other recreational users

would continue to enjoy more natural environments and ecosystems and the opportunities to observe naturally functioning ecosystems. The removal of bear bait stations could reduce the potential for bears in preserves to become conditioned to human foods and minimize the public safety concerns presented by these bears.

### **3.5 Impacts on Wilderness Character**

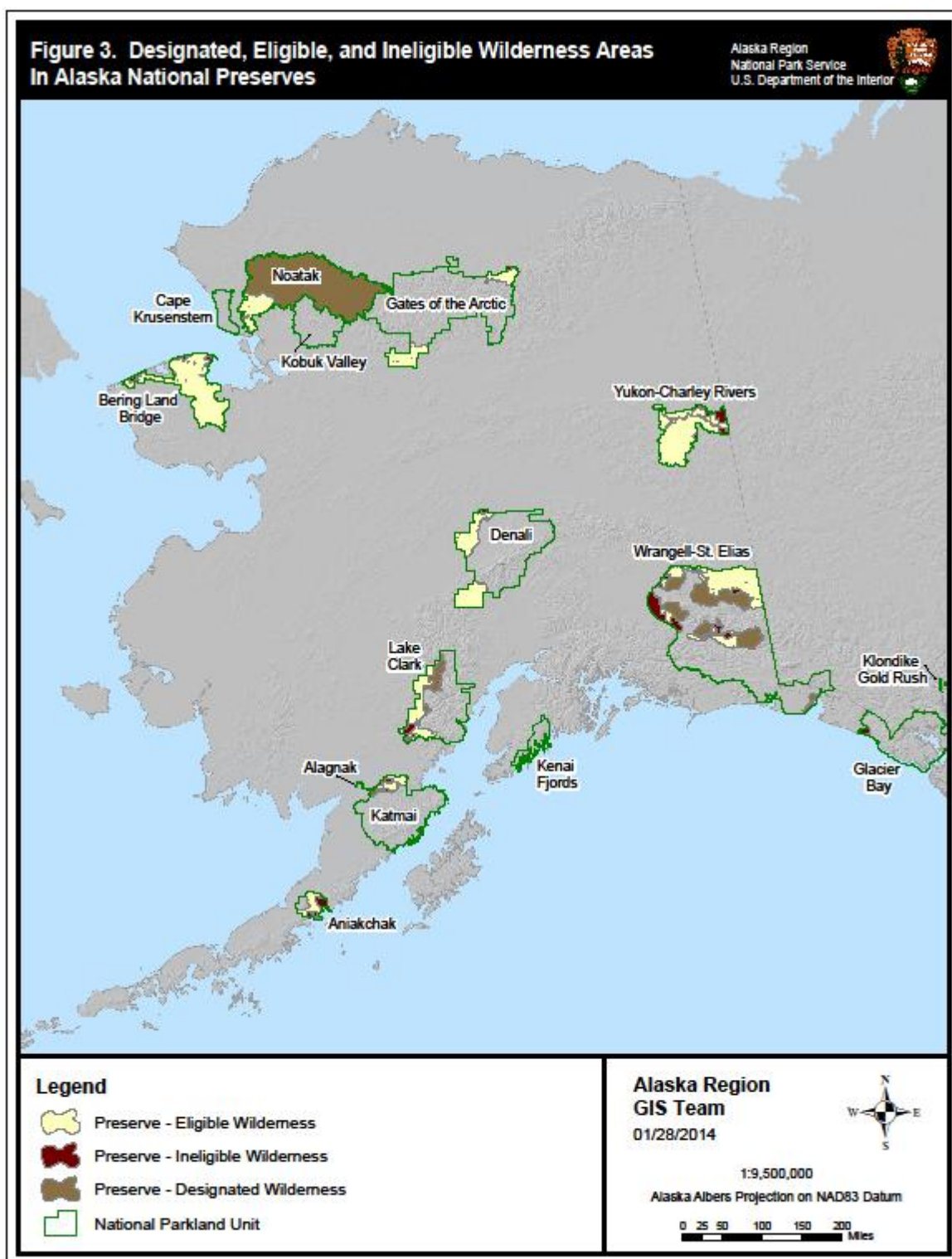
#### 3.5.1 Wilderness in Preserves and Current Status of Wilderness Character

The 1964 Wilderness Act directs federal agencies to manage wilderness so as to preserve its wilderness character. NPS Management Policies 6.3.1 require the Service to preserve wilderness character of lands in any category of wilderness. Section 701 of ANILCA designated wilderness areas in National Park System units in Alaska, including parts of national preserves. Section 1317 of ANILCA required the Secretary of the Interior to conduct additional reviews of areas to determine their suitability for wilderness designation, which were completed as part of the NPS General Management Plans completed between 1984 and 1986. Alaska National Preserves contain approximately 8,095,000 acres of designated wilderness and approximately 11 million acres of eligible wilderness. See Figure 3 (Map of Designated and Eligible Wilderness Areas in Alaska National Preserves) and Table 3.

Attributes of wilderness character are generally described in terms of being natural, untrammeled, undeveloped, providing opportunities for solitude and primitive and unconfined recreation, and having other features of value. Wilderness character on wilderness lands in the national preserves in Alaska is generally exceptional. They contain vast areas in their natural condition and are almost entirely untrammeled. The fact that these lands remain largely free from modern human influences sets them apart from wilderness areas in the lower 48 and from Alaska lands outside the wilderness boundaries. Encompassing vast acreages with few permit requirements or other management controls; these lands and waters provide outstanding opportunities for solitude or primitive and unconfined recreation. Aside from an occasional cabin or scientific instrument, there are minimal modern human developments.

#### 3.5.2 Effects on Wilderness of Alternative A: Adopt All SOA Wildlife Harvest Regulations in National Preserves

*Natural*—Wilderness ecological systems are substantially free from the *effects* of modern civilization.



These predator harvest liberalizations under the no-action alternative that intend to decrease predator populations and increase ungulates available for harvest would degrade the natural quality of the wilderness areas from the reduction in populations of indigenous predators and the concomitant increase in prey species and by altering natural wildlife behavior (for example, baiting of bears alters their behavior).

*Untrammeled*—Wilderness is essentially unhindered and free from the intentional actions of modern human influences.

This quality is influenced by any activity or action that intentionally controls or influences the components or processes of ecological systems inside wilderness. The no-action alternative could have long-term negative impacts to the untrammeled quality of wilderness character because the alternative involves wide-scale control and manipulation of wildlife populations and behaviors.

*Solitude or a Primitive and Unconfined Type of Recreation*—Wilderness provides outstanding opportunities for solitude or primitive and unconfined recreation.

This quality is primarily about the opportunity for people to experience solitude and self-reliance, and is influenced by settings that affect these opportunities. This quality could be degraded under the no-action alternative by increasing the likelihood of visitor encounters, adding signs of modern civilization inside wilderness (i.e. bear baiting stations), and creating safety concerns (food-conditioned bears, for example). Additional impacts related to visitor experience are covered in the Impacts to Public Use and Enjoyment section.

*Undeveloped*—Wilderness retains its primeval character and influence, and is essentially without permanent improvement or modern human occupation.

The no-action alternative may result in a higher level of use and more motorized access to the preserves than currently exists. Increased motorized access could impact the undeveloped quality of wilderness areas in preserves.

*Other Features of Value*—Wilderness protects other tangible features that are of scientific, educational, scenic, or historical value.

The no-action alternative could affect the scientific and educational values of these large natural areas by creating unnatural wildlife abundances, distributions, and behaviors.

Cumulative Effects:

Other effects on wilderness character could result from the following:

Natural Quality: Climate change and illegal harvest of wildlife have the potential to influence natural ecosystems and processes.



**Untrammelled:** There are extremely few examples of intentional manipulation of wilderness resources. Actions from the no-action alternative would contribute the majority of impacts.

**Opportunities for Solitude:** Other visitor use that occurs in the national preserves affects opportunities for solitude, though existing use levels in the preserves tends to be very low.

**Undeveloped:** Ongoing motorized access by the public and for administrative activities, including maintenance of scattered communications and weather station sites could negatively impact the undeveloped quality of wilderness areas. NPS does not anticipate additional developments in wilderness. The Ambler Mining District Road is a potential development project in the Gates of the Arctic National Preserve, an area eligible for wilderness designation.

These cumulative effects are expected to negatively impact wilderness character. Combined with the no-action alternative, the effects would likely result in slight degradation of wilderness character. The no-action alternative contributes to degradation of wilderness character.

#### Conclusion:

The No-Action Alternative is expected to result in long-term negative impacts to wilderness character. It could degrade the natural quality, untrammelled quality, opportunities for solitude, and the undeveloped quality throughout the preserves.

#### 3.5.3 Effects on Wilderness of Alternative B: Promulgate NPS Wildlife Harvest Regulations in Alaska National Preserves

*Natural*—Wilderness ecological systems are substantially free from the *effects* of modern civilization.

This alternative would preserve the natural quality by not adopting proposals designed to reduce predator populations to stimulate larger ungulate populations for human harvest. Restricting or prohibiting bear baiting would preserve natural bear behavior. This alternative is compatible with the maintenance of natural ecosystems, processes, and wildlife populations and behaviors.

*Untrammelled*—Wilderness is essentially unhindered and free from the intentional actions of modern human control or manipulation.

This quality is influenced by any activity or action that intentionally controls or influences the components or processes of ecological systems inside wilderness. This alternative would preserve the untrammelled quality by prohibiting activities involving predator reduction efforts with the intent or potential to alter or manipulate natural predator-prey dynamics and associated natural ecological processes to increase harvest of ungulates.

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*Solitude or a Primitive and Unconfined Type of Recreation*—Wilderness provides outstanding opportunities for solitude or primitive and unconfined recreation.

This quality is primarily about the opportunity for people to experience solitude and self-reliance, and is influenced by settings that affect these opportunities. This quality would not be changed or affected by the NPS potential regulations, except the removal of bear bait stations could result in fewer negative encounters with wildlife or between bear hunters and other visitors to the preserve areas. Additional impacts related to visitor experience are covered in the Impacts to Public Use and Enjoyment section.

*Undeveloped*—Wilderness retains its primeval character and influence, and is essentially without permanent improvement or modern human occupation.

This quality would be maintained because no increases in ANILCA-authorized motorized access are expected. Therefore, the current undeveloped quality would be preserved.

*Other Features of Value*—Wilderness preserves other tangible features that are of scientific, educational, scenic, or historical value.

This alternative would likely not affect other features of value such as research and observations on naturally functioning ecosystems.

#### Cumulative Effects:

Other cumulative effects would be the similar to the no-action alternative. These cumulative effects have a small negative impact on wilderness character. Combined with this alternative, these adverse effects are expected to be small and inconsequential to wilderness character in the national preserves.

#### Conclusion:

This alternative is expected to result in little change to wilderness character. For the most part, the natural, untrammeled, and undeveloped qualities, as well as opportunities for solitude, would be unchanged throughout the preserves.



## 4.0 CONSULTATION & COORDINATION

### 4.1 Public Involvement

The NPS consulted with the State of Alaska Department of Fish and Game and the Board of Game, pursuant to Section 1313 of ANILCA. Subsequently the NPS circulated letters to invite consultation with potentially affected Native tribes in Alaska, pursuant to Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments) and Department of the Interior Secretarial Order 3317, and potentially affected ANCSA Corporations, pursuant to Secretary of the Interior Order 3317. A list of tribes and ANCSA Corporations contacted is attached in Appendix C.

A press release was issued on month/day/year to announce availability of the EA for a 60-day public review period, essentially concurrent with release of the proposed regulations, from month/day to month/day/2014. The EA is available on the NPS Planning Environment and Public Communications (PEPC) webpage at: XXXXX.

### 4.2 List of Preparers

Table 4 lists personnel who prepared sections of the environmental assessment.

**Table 4 List of Preparers (Interdisciplinary Team)**

Name	Position	Location	EA Sections
Andee Sears	Regional Law Enforcement Specialist (Project Leader)	NPS Alaska Regional Office, Anchorage, AK	Purpose and Need & Alternatives
Bud Rice	Environmental Protection Specialist (EA Coordinator)	NPS Alaska Regional Office, Anchorage, AK	Public Use & Enjoyment, ANILCA 810
Grant Hilderbrand	Regional Wildlife Biologist	NPS Alaska Regional Office, Anchorage, AK	Wildlife & Habitat
Sandy Rabinowitch	Regional Subsistence Manager	NPS Alaska Regional Office, Anchorage, AK	Subsistence
Adrienne Lindholm	Regional Wilderness Coordinator	NPS Alaska Regional Office, Anchorage, AK	Wilderness Character
Brooke Merrell	Regional Environmental Coordinator	NPS Alaska Regional Office, Anchorage, AK	Purpose & Need
Angel Solomon	GIS Specialist	NPS Alaska Regional Office, Anchorage, AK	Maps

## 5.0 REFERENCES CITED

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## APPENDIX A

### ANILCA SECTION 810(a) SUBSISTENCE EVALUATION AND FINDING

#### I. Introduction

Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA) requires Federal agencies having jurisdiction over lands in Alaska to evaluate the potential impacts of proposed actions on subsistence uses and needs. This analysis evaluates the potential restrictions to ANILCA Title VIII subsistence uses and needs that could result should the National Park Service (NPS) revise sport wildlife harvest restrictions in NPS Alaska preserve units where ANILCA Title VIII subsistence is allowed. The NPS is proposing new regulations to not allow various State of Alaska predator population controls and sport harvest methods on NPS lands in Alaska, among other related regulations. In particular, the NPS proposes to not allow the following, and any similar predator harvest methods and objectives:

- hunting black bears, including sows with cubs, with artificial light while denning;
- harvesting brown bears over bait (which often includes dog food, bacon/meat grease, donuts, and other human food sources); and
- taking wolves and coyotes (including pups) during the denning season when their pelts have little trophy, economic, or subsistence value.

The NPS is granted broad statutory authority under various acts of Congress to manage and regulate activities in areas of the National Park System, (16 U.S.C. 1a-2(h), 3, and 3120).

#### II. The Evaluation Process

Section 810(a) of ANILCA 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 would involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps would be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.*

Section 201 of ANILCA created new preserve units of the national park system in Alaska for the following purposes:

Aniakchak National Monument and Preserve, containing approximately one hundred and thirty-eight thousand acres of public lands, was created by ANILCA, section 201(1) for the following purposes:

The monument and preserve shall be managed for the following purposes, among others: To maintain the caldera and its associated volcanic features and landscape, including the Aniakchak River and other lakes and streams, in their natural state; to study, interpret, and assure continuation of the natural process of biological succession; to protect habitat for, and populations of, fish and wildlife, including, but not limited to, brown/ grizzly bears, moose, caribou, sea lions, seals, and other; marine mammals, geese, swans, and other waterfowl and in a manner consistent with the foregoing, to interpret geological and biological processes for visitors. Subsistence uses by local residents shall be permitted in the monument where such uses are traditional in accordance with the provisions of Title VIII.

Bering Land Bridge National Preserve, containing approximately two million four hundred and fifty-seven thousand acres of public land, was created by ANILCA, section 201(2) for the following purposes:

To protect and interpret examples of arctic plant communities, volcanic lava flows, ash explosions, coastal formations and other geologic processes; to protect habitat for internationally significant populations of migratory birds; to provide for archeological and paleontological study, in cooperation with Native Alaskans, of the process of plant and animal migration, including man, between North America and the Asian Continent, to protect habitat for, and populations of, fish and wildlife including, but not limited to, marine mammals, brown/grizzly bears, moose and wolves; subject to such reasonable regulations as the Secretary may prescribe, to continue reindeer grazing use, including necessary facilities and equipment, within the areas which on January 1, 1976, were subject to reindeer grazing permits, in accordance with sound range management practices; to protect the viability of subsistence resources; and in a manner consistent with the foregoing, to provide for outdoor recreation and environmental education activities including public access for recreational purposes to the Serpentine Hot Springs

area. The Secretary shall permit the continuation of customary patterns and modes of travel during periods of adequate snow cover within a one-hundred-foot right-of-way along either side of an existing route from Deering to the Taylor Highway, subject to such reasonable regulations as the Secretary may promulgate to assure that such travel is consistent with the foregoing purposes.

Gates of the Arctic National Preserve, containing approximately nine hundred thousand acres of Federal lands, was created by ANILCA, section 201(4)(a) for the following purposes:

The park and preserve shall be managed for the following purposes, among others: To maintain the wild and undeveloped character of the area, including opportunities for visitors to experience solitude, and the natural environmental integrity and scenic beauty of the mountains, forelands, rivers, lakes, and other natural features; to provide continued opportunities, including reasonable access, for mountain climbing, mountaineering, and other wilderness recreational activities, and to protect habitat for and the populations of, fish and wildlife, including, but not limited to, caribou, grizzly bears, Dall sheep moose, wolves, and raptorial birds. Subsistence uses by local residents shall be permitted in the park, where such uses are traditional, in accordance with the provisions of Title VIII.

Lake Clark National Preserve, containing approximately one million two hundred and fourteen thousand acres of public lands, was created by ANILCA, section 201(7)(a) for the following purposes:

The park and preserve shall be managed for the following purposes, among others: To protect the watershed necessary for perpetuation of the red salmon fishery in Bristol Bay; to maintain unimpaired the scenic beauty and quality of portions of the Alaska Range and the Aleutian Range, including active volcanoes, glaciers, wild rivers, lakes, waterfalls, and alpine meadows in their natural state; and to protect habitat for and populations of fish and wildlife including but not limited to caribou, Dall sheep, brown/grizzly bears, bald eagles, and peregrine falcons. ...Subsistence uses by local residents shall be permitted in the park where such uses are traditional in accordance with the provisions of Title VIII.

Noatak National Preserve, containing approximately six million four hundred and sixty thousand acres of public lands, was created by ANILCA, section 201(8)(a), for the following purposes:

To maintain the environmental integrity of the Noatak River and adjacent uplands within the preserve in such a manner as to assure the continuation of geological and biological processes unimpaired by adverse human activity; to protect habitat for, and populations of, fish and wildlife, including but not limited to caribou, grizzly bears Dall sheep, moose, wolves, and for waterfowl, raptors, and other species of birds; to protect archeological resources; and in a manner consistent with the foregoing, to provide opportunities for scientific research. The Secretary may establish a board consisting of

scientists and other experts in the field of arctic research in order to assist him in the encouragement and administration of research efforts within the preserve.

Wrangell-Saint Elias National Preserve containing approximately four million one hundred and seventeen thousand acres of public lands was created by ANILCA, section 201(9), for the following purposes:

The park and preserve shall be managed for the following purposes, among others: To maintain unimpaired the scenic beauty and quality of high mountain peaks, foothills, glacial systems, lakes, and streams, valleys, and coastal landscapes in their natural state; to protect habitat for, and populations of, fish and wildlife including but not limited to caribou, brown/grizzly bears, Dall sheep, moose, wolves, trumpeter swans and other waterfowl, and marine mammals; and to provide continued opportunities including reasonable access for mountain climbing, mountaineering, and other wilderness recreational activities. Subsistence uses by local residents shall be permitted in the park, where such uses are traditional, in accordance with the provisions of Title VIII.

Yukon-Charley Rivers National Preserve, containing approximately one million seven hundred and thirteen thousand acres of public lands, was created by ANILCA, section 201(9), for the following purposes:

The preserve shall be managed for the following purposes, among others: To maintain the environmental integrity of the entire Charley River basin, including streams, lakes and other natural features, in its undeveloped natural condition for public benefit and scientific study; to protect habitat for, and populations of, fish and wildlife, including but not limited to the peregrine falcons and other raptorial birds, caribou, moose, Dall sheep, grizzly bears, and wolves; and in a manner consistent with the foregoing, to protect and interpret historical sites and events associated with the gold rush on the Yukon River and the geological and paleontological history and cultural prehistory of the area. Except at such times when and locations where to do so would be inconsistent with the purposes of the preserve, the Secretary shall permit aircraft to continue to land at sites in the Upper Charley River watershed.

### **ADDITIONS TO EXISTING AREAS**

Section 202 of ANILCA created new units and additions to the following Alaska NPS areas:

Glacier Bay National Monument was expanded by the addition of an area containing approximately five hundred and twenty-three thousand acres of Federal land. Approximately fifty-seven thousand acres of additional public land was established as Glacier Bay National Preserve. The monument was re-designated as "Glacier Bay National Park". The monument addition and preserve was created by ANILCA, section 202(1), for the following purposes:

To protect a segment of the Alsek River, fish and wildlife habitats and migration routes and a portion of the Fairweather Range including the northwest slope of Mount Fairweather. Lands, waters, and interests therein within the boundary of the park and preserve which were within the boundary of any national forest are hereby excluded from such national forest and the boundary of such national forest is hereby revised accordingly.

Approximately three hundred and eight thousand acres of additional public land was established as Katmai National Preserve. The park and preserve were created by ANILCA, section 202(2), for the following purposes:

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.

Approximately one million three hundred and thirty thousand acres of additional public land was established as Denali National Preserve. The park additions and preserve were created by ANILCA, section 202(3)(a) for the following purposes:

To protect and interpret the entire mountain massif, and additional scenic mountain peaks and formations; and to protect habitat for, and populations of fish and wildlife including, but not limited to, brown/grizzly bears, moose, caribou, Dall sheep, wolves, swans and other waterfowl; and to provide continued opportunities, including reasonable access, for mountain climbing, mountaineering and other wilderness recreational activities. That portion of the Alaska Railroad right-of-way within the park shall be subject to such laws and regulations applicable to the protection of fish and wildlife and other park values as the Secretary, with the concurrence of the Secretary of Transportation, may determine. Subsistence uses by local residents shall be permitted in the additions to the park where such uses are traditional in accordance with the provisions in Title VIII.

## **GENERAL ADMINISTRATION**

Among other general administrative provisions, section 203 of ANILCA states, “Subsistence uses by local residents shall be allowed in national preserves.”

## **TITLE VI, PART C – ADDITION TO NATIONAL WILD AND SCENIC RIVERS**

### **SYSTEM LOCATED OUTSIDE NATIONAL PARK SYSTEM UNITS**

Section 603(a) of ANILCA designated the following wild and scenic river outside the national park system in Alaska:

ALAGNAK, ALASKA. – Those segments or portions of the main stem and Nonvianuk tributary lying outside and westward of the Katmai National Park /Preserve and running to the west boundary of township 13 south, range 43 west; to be administered by the Secretary of the Interior.

### **III. Proposed Action on Federal Lands**

The potential for significant restriction must be evaluated for the proposed action's effect upon "... 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." (Section 810(a))

The NPS is considering whether to, and the elements of, new regulations to disallow the implementation of State of Alaska (SOA) regulations and Board of Game (BOG) decisions designed to manipulate and control predator populations to enhance big game populations for maximum human harvest opportunities in national preserves in Alaska. These regulations would only affect sport hunting activities; they would not affect Federal Subsistence Board regulations and decisions regarding subsistence uses on federally-managed lands in Alaska. The following is a brief summary of the proposed alternatives considered in the environmental assessment (EA):

#### ***Alternative A - No-Action (Adopt All SOA Wildlife Harvest Regulations in National Preserves)***

The NPS would not renew Compendia restrictions or promulgate new regulations to disallow various SOA regulations and decisions to increase seasons and take of predators in order to enhance and increase human harvest potential of ungulates. Examples of recent BOG decisions that would be allowed are described in part I-Introduction of this analysis. All current and future SOA and BOG decisions on harvest methods and means would apply on national preserves as on other adjacent areas; however, they would not apply on national parks and monuments in Alaska where only federal subsistence is allowed by NPS-qualified local rural residents under applicable federal subsistence rules.

#### ***Alternative B - NPS Wildlife Harvest Restrictions in Alaska National Preserves (NPS & Environmentally Preferable Alternative)***

NPS regulations would (i) prohibit taking of wildlife, hunting or trapping activities, or management actions involving predator reduction efforts with the intent or potential to alter or manipulate natural predator-prey dynamics and associated natural ecological processes to increase harvest of ungulates and (ii) maintain long-standing prohibited sport hunting practices and prohibit other practices that are inconsistent with NPS policy. The NPS restrictions may also discontinue the current use of bait to attract and take black bears because the practice would condition some black bears to human foods, which bears are not all harvested, and because brown bears are also inevitably attracted to these sites.

#### **IV. Affected Environment**

Subsistence uses, as defined by ANILCA, Section 810, means “The customary and traditional use by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of non-edible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade.” Subsistence activities include hunting, fishing, trapping, and collecting berries, edible plants, and wood or other materials.

ANILCA and National Park Service regulations authorize subsistence use of resources in all Alaska national parks, monuments, preserves and components of the Wild and Scenic River System with the exception of Glacier Bay National Park, Katmai National Park, Kenai Fjords National Park, Klondike Gold Rush National Historical Park, “old” Mount McKinley National Park, and Sitka National Historical Park (Codified in 36 CFR Part 13, Subparts A, B, and C). ANILCA provides a preference for local rural residents over other consumptive users should a shortage of subsistence resources occur and allocation of harvest becomes necessary.

Comprehensive descriptions of the affected subsistence environment within each Alaska national park system unit can be found in:

- “General Management and Land Protection Plans” for each NPS unit. (See online at [http:// www.nps.gov](http://www.nps.gov))
- Alaska Department of Fish and Game General and Subsistence Harvest Information and Publications (See online at <http://www.state.ak.us/adfg> )
- Federal Subsistence Management Regulations, Office of Subsistence Management, FWS, ( See on line at <http://alaska.fws.gov/asm/home.html>)
- National Park Service Management Policies, NPS, 2006. Information and Publications (See online at [http:// www.nps.gov/policy](http://www.nps.gov/policy))
- Alaska Subsistence, NPS Management History, NPS 2002
- Title 36 Code of Federal Regulations, Part 13 National Park System Units in Alaska

The NPS recognizes that patterns of subsistence use vary from time to time and from place to place depending on the availability of wildlife and other renewable natural resources. A subsistence harvest in a given year may vary considerably from previous years because of weather, migration patterns, and natural population cycles.

#### ***V. Subsistence Uses and Needs Evaluation***

##### **Potential Impacts to Subsistence Users**

To determine the potential impacts on existing subsistence activities for the proposed action, three evaluation criteria were analyzed relative to existing subsistence resources.

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

Potential Impacts of Alternative A - No Action (*Adopt All SOA Wildlife Harvest Regulations in Preserve Areas*)

1. The potential to impact populations:

(a) Effects on Population Levels:

The no-action alternative implementing all SOA wildlife harvest regulations in national preserves in Alaska may cause a decline in predator populations in the affected areas due to higher levels of sport harvest and trapping, which could reduce the opportunity for subsistence trappers to trap wolves and coyotes or subsistence harvest of these species. Prey populations may increase in some areas as a result of reduced predator populations, which could increase harvest of prey species such as caribou and moose.

(b) Redistribution of Resources:

The no-action alternative could result in a higher take of bears, wolves, and coyotes, which may displace resources for subsistence trappers and hunters in the affected areas. Also, where prey populations increase as a result of predator reductions, additional sport hunters may concentrate in these areas and result in greater sport harvest of prey species like caribou and moose.

(c) Habitat Loss:

The no-action alternative could result in increased prey distribution, densities, and populations and possible increased overgrazing and habitat loss, which result in reduced availability of subsistence resources over time.

Impacts to subsistence resources and habitat from the no-action alternative may have adverse effects on subsistence uses; however, in the event of a resource shortage, ANILCA requires non-subsistence harvest be limited before Title VIII subsistence harvest. The NPS would work closely with subsistence users to assure adequate access to subsistence resources in the affected area.



## 2. Restriction of Access:

Where harvests of wolves and coyotes during the denning season are successful, the no-action alternative may alter current subsistence use patterns for trapping and hunting of these species. The use of human foods or other items not naturally occurring in the areas as bait to attract bears to a kill site may result in more nuisance bears at subsistence camps because some bears would become habituated to human foods.

## 3. Increase in Competition:

The no-action alternative may result in restrictions and/or increased competition for ANILCA Title VIII subsistence resources on Federal public lands within the affected areas because predators would become less available for subsistence users and increased populations of prey species would likely attract more sport hunters to these national preserve areas.

### Potential Impacts of Alternative B – NPS Wildlife Harvest Restrictions (*NPS Preferred Alternative*)

#### 1. The potential to impact populations:

##### (a) Effects on Population Levels:

The proposed action to implement new NPS regulations for national preserves in Alaska is not expected to cause a significant decline or change in any wildlife species in the affected areas.

##### (b) Redistribution of Resources:

The proposed actions are not expected to cause a significant displacement of subsistence resources in the affected areas.

##### (c) Habitat Loss:

The proposed actions are expected to be beneficial for maintaining habitat for key subsistence resources within the affected areas. Proposed actions are expected to maintain at natural levels the distribution, densities, and availability of subsistence resources.

Impacts to subsistence resources and habitat from the proposed actions are not expected to have adverse effects on subsistence uses, because subsistence uses would have a priority for ungulate resources if populations decline to the point that sport harvest overly competes for subsistence uses of the desired resources. The NPS would work closely with subsistence users to assure adequate access to subsistence resources in the affected area.



4. Restriction of Access:

The proposed actions are not expected to significantly restrict current subsistence use patterns. Access for Title VIII subsistence uses within NPS areas is permitted according to Federal and State law and regulations. The use of human foods or other items not naturally occurring in the areas as bait to attract bears to a kill site may be discontinued under the proposed rules.

5. Increase in Competition:

The proposed action is not expected to significantly restrict or increase competition for ANILCA Title VIII subsistence resources on Federal public lands within the affected areas.

**VI. Availability of Other Lands**

The proposed actions are consistent with NPS mandates in NPS areas in Alaska. Subsistence users may have access to similar desired resources in national parks and monuments.

**VII. Alternatives Considered**

No other alternatives were identified that would reduce or eliminate the use of NPS public lands needed for subsistence purposes.

**VII. Findings**

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