

Appendix D.3.a: Environmental Assessment

ENVIRONMENTAL ASSESSMENT
FIRE MANAGEMENT PLAN
FOR
WESTERN ARCTIC NATIONAL PARKLANDS

NATIONAL PARK SERVICE
WESTERN ARCTIC NATIONAL PARKLANDS

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TABLE OF CONTENTS

I. INTRODUCTION	
A. Purpose and Need	124
B. Background	124
C. Issues and Impact Topics	128
D. Issues and Impact Topics Considered but Dismissed	129
II. RANGE OF ALTERNATIVES	
A. Introduction	130
B. Actions Common to all Alternatives	130
C. Alternatives	131
D. Alternatives Considered but Rejected	131
E. Environmentally Preferred Alternative	132
III. AFFECTED ENVIRONMENT	
A. Introduction	132
B. Natural Features	132
C. Cultural Features	133
D. Historical Role of Fire	133
E. Wildland Fire Management Situation	133
IV. ENVIRONMENTAL CONSEQUENCES	
A. Impacts of Alternatives	134
B. Cumulative Impact Mitigation	139
C. Impacts of Alternatives Summary	140
V. CONSULTATION AND COORDINATION	140
LITERATURE CITED	141
PREPARER	141

ENVIRONMENTAL ASSESSMENT

Fire Management Plan for Western Arctic National Parklands

I. INTRODUCTION

A. Purpose and Need

The National Park Service proposes implementing National Park Service Director's Order 18 (DO-18) (2002) by establishing a Fire Management Plan for Western Arctic National Parklands (WEAR). This fire management plan is a comprehensive document that outlines the WEAR fire management goals and describes the policies and actions by which these goals will be realized. The plan formalizes park-specific responsibilities for implementing the Alaska Interagency Wildland Fire Management Plan and formalizes park-specific fire management decision making process and procedures, redefines fire management strategies, articulates the park's fire management organization and responsibilities, and establishes the direct linkage between the resource management goals and fire management strategies. With the implementation of the proposed action, fire management within WEAR will remain status quo.

The Fire Management Plan is necessary to comply with DO-18, and codifies the way fire will be managed within WEAR. Although fire protection needs may arise and remain the first priority, managers need to consider that fire has long been an integral component of the area's ecosystems and is critical for the maintenance of virtually all indigenous conditions, from plant and animal populations to soil and permafrost layers. Accordingly, the scope of the preferred alternative and other considered alternative entail the planning and implementation of policies and practices flexible enough to allow the simultaneous pursuit of protection and resource management goals.

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act of 1969 and the regulations of the Council of Environmental Quality (40 CFR 1508.9). It evaluates the potential impacts to cultural and natural resource values that could result from implementing the Western Arctic National Parklands Fire Management Plan. The environmental assessment is intended to facilitate decision-making, based on an understanding of the environmental consequences of the proposal, and to determine whether preparation of an environmental impact statement is required.

B. Background

Two federal legislative acts, the Organic Act and the General Authorities Act, prohibit impairment of park resources and values. NPS Management Policies and Director's Order 12 use the terms "resources and values" to mean the full spectrum and intangible attributes for which the park is established and are managed, including the Organic Act's fundamental purpose and any additional purposes as stated in the park's establishing legislation. The impairment of park resources and values are not allowed unless directly and specifically provided by statute. The primary responsibility of the National Park Service is to ensure that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunity for enjoyment of them. The evaluation of whether impacts of a proposed action would lead to an impairment of park resources and values is included in this environmental assessment. Impairment may occur when there are potential impacts to a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or

- identified as a goal in the park's general management plan or other relevant NPS planning documents.

In 1980, Congress created numerous new Parks, Preserves and Monuments through the passing of the Alaska National Interest Lands Conservation Act (ANILCA). This legislation provided a comprehensive statement of purpose for all recently designated Alaskan Park, Preserve and Monument areas. Section 201[4] of ANILCA specifically establishes the four units that now comprise the Western Arctic National Parklands and ascribes them to the following missions, among others:

Bering Land Bridge National Preserve: “To protect and interpret examples of arctic plant communities, volcanic lava flows, ash explosions, coastal formations and other geological 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;...to continue reindeer grazing use...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 the outdoor recreation and environmental education activities including public access for recreational purposes to the Serpentine Hot Springs area.”

Cape Krusenstern National Monument: “ To protect and interpret a series of archeological sites depicting every known cultural period in arctic Alaska; to provide for scientific study of the process of human population of the area from the Asian Continent, in cooperation with Native Alaskans, to preserve and interpret evidence of prehistoric and historic Native cultures, to protect habitat for seals and other marine mammals; to protect habitat for and populations of birds, and other wildlife, and fish resources; and to protect the viability of subsistence resources...”

Kobuk Valley National Park: “ To maintain the environmental integrity of the natural features of the Kobuk River Valley, including the Kobuk, Salmon and other rivers, the boreal forest, and the Great Kobuk Sand Dunes, in an undeveloped state, to protect and interpret, in cooperation with Native Alaskans, archeological sites associated with Native cultures; to protect migration routes for the Arctic caribou herd; to protect habitat for, and populations of, fish and wildlife including but not limited to caribou, moose, black and grizzly bears, wolves, and waterfowl and to protect the viability of subsistence resources.”

Noatak National Preserve: “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 Western Arctic Parks General Management Plans (Four separate plans: BELA, CAKR, KOVA, NOAT) (1986) specifies these objectives directly relevant to the WEAR fire management program: 1) To protect and interpret natural ecosystems and their individual components, based on an understanding of the role played by natural processes, including fire. (BELA, GMP: 6) 2) To manage natural resources to perpetuate ecological processes and systems. (CAKR, GMP: 196) (KOVA, GMP: 179) 3) To allow natural forest and tundra fires to fulfill their ecological role in vegetation succession. (KOVA, GMP: 63) (NOAT, GMP: 79)

In 1984 the National Park Service cooperated with Bureau of Land Management, Alaska Department of Natural Resources, Alaska Department of Fish and Game, US Fish and Wildlife Service, Bureau of Indian Affairs, and Alaska Native regional and local village corporations to produce an Interagency Fire Management Plan for the Kobuk and Seward/Koyukuk Planning Areas. This plan provided direction for fire management activity in Western Arctic National Parklands until 1998, when a variety of documents were consolidated and approved as the Alaska Interagency Wildland Fire Management Plan (AIWFMP). During the development of the original interagency fire management plan, the land owners/managers determined the protection needs for the lands they manage/own. The lands were placed under critical, full, modified or limited protection categories; with categorization based on presence and/or proximity of values to be protected, as well as the resource management objectives of the pertinent land management agency (see Table 1 for description of categories). Under the AIWFMP, the fire protection needs are reviewed annually by the land owners/managers. Each reported wildland fire is managed in accordance with the categorization of the sub-unit in which it occurs, with responses ranging from rapid and aggressive attack by all available forces in the case of fires detected in Critical Protection areas, to periodic surveillance for fires detected in Limited Protection areas (see Map 3a and 3B: Appendix S.2 for vicinity map of WEAR units).

Table 1: Alaska Interagency Wildland Fire Management Plan Options

Protection Category	Policy	Intent
Critical	- Aggressive suppression of fires within or threatening designated areas. - Highest priority for available resources.	- Prioritization of suppression actions for wildland fires threatening human life, inhabited property, and/or other designated structures. - Complete protection of designated sites.
Full	Aggressive suppression of fires within or threatening designated areas, depending upon availability of resources.	Protection of uninhabited cultural and historical sites, private property, and high-value natural resources.
Modified	- Fires in designated areas receive initial attack depending on availability of resources, unless land manager chooses otherwise and documents with WFSA. - After designated conversion date, operational response to Modified protection zones is identical to that of Limited zones.	- Greater flexibility in selection of suppression strategies when chance of spread is high (e.g., indirect attack). - Reduced commitment of resources when risk is low. - Balancing of acres burned with suppression costs and with accomplishment of resource management objectives.
Limited	- Wildland fires allowed to burn within predetermined areas. - Continued protection of human life and site-specific values. - Surveillance.	- Reduction of long-term costs and risks through reduced frequency of large fires. - Reduction of immediate suppression costs. - Facilitation of bio-diversity and ecological health

This EA presents two alternatives for the application and use of wildland fire as a management tool for resource benefits. All of the alternatives discussed here, including the preferred alternative described throughout the proposed WEAR fire management plan, would entail continued compliance with the AIWFMP, while at the same time bringing the WEAR fire management program into compliance with recently developed National Park Service directives. **NPS Director's Order 18** (2002) mandates a distinction between **prescribed fire**, defined as any fire planned and implemented by management, and **wildland fire**, defined as any unplanned ignition, whether human or natural. Wildland fire incidents, in turn, fall into two categories: **Wildland Fire Use** entails the management of certain unplanned ignitions for the achievement of management goals, including the reduction of dangerous and unnatural accumulations of burnable vegetation and the preservation of fire in its natural role; **wildland fire suppression** entails a broad spectrum of actions aimed at protecting life, property, and sensitive resources while also ensuring firefighter safety, cost effectiveness, and minor disturbance from suppression activities.

Each of the alternatives presented in this Environmental Assessment comprises of a particular combination of the various management strategies permitted under NPS Director's Order 18. These alternatives have been evaluated for their ability to contribute to the accomplishment of the resource management objectives described above.

C. Impact Topics Addressed and Analyzed

Impact topics were identified to focus the analysis of alternatives on the most relevant subject matter and resources of concern. A brief rationale for each impact topic follows, as well as the reasons for dismissing specific topics from further analysis.

Vegetation and Biodiversity

The National Environmental Policy Act (1969) requires analysis of impacts on all affected components of the ecosystem, including biotic communities of plants and animals. NPS Management Policies (2001) requires maintenance of these communities, including their natural abundance, diversity and ecological integrity. Fire plays an important role in changes to vegetative cover which in turn affects habitat and overall ecological health.

Cultural Resources

Cultural resources can be significantly affected by fire and play a critical role in determining fire management units and specific fire responses.

Aesthetics and Recreation

The mission of the NPS, as stated in the Organic Act of 1916, is to "conserve the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same." Within WEAR, Bering Land Bridge was given direction from ANILCA specifically for the management of recreation. ANILCA stated that Bering Land Bridge was "to provide for the outdoor recreation and environmental education activities including public access for recreational purposes to the Serpentine Hot Springs area." Scenic values, recreational activities, and general visitation within and around fire prone areas may be temporarily impacted by fire-related actions.

Local Economy

The National Environmental Policy Act (NEPA) regards impacts to the human environment to include any effects of federal actions on the social and economic well being of communities and individuals. Fires may limit economic opportunities and fire management may provide increased opportunities around bases of operation and for material suppliers.

Wetlands and Floodplains

Executive Orders 11988 and 11900 require the consideration of impacts to floodplains and wetlands. Fires in the interior of Alaska often burn the vegetation of wetlands, which may be the sites of management actions.

Subsistence Use and Wildlife Habitat

Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (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." Subsistence use may be temporarily impacted, by fire management decisions.

Air Quality

The 1963 federal Clean Air Act (42 U.S.C. 7401 *et seq.* as amended) stipulates that federal land managers have an affirmative responsibility to protect a park's air quality related values (including visibility, plants, animals, soils, water quality, cultural resources, and visitor health) from adverse air pollution impacts. Specifically all four management units are classified as Class II airsheds, minimizing acceptable levels of pollutants to these areas by very specific parameters and forcing the NPS to hold Air quality to a high standard. Air quality would potentially be affected in the short-term during any type of ignition event.

Water Quality and Fisheries

National Park Service policies require the protection of water resources consistent with the Clean Water Act. Increased erosion following a fire may affect water quality.

Wilderness Resource Values

National Park Service Director's Orders 41, on Wilderness Preservation and Management, states that "Fire management activities conducted in wilderness areas will conform to the basic purposes of wilderness". Western Arctic National Parklands contains large areas of designated and suitable wilderness which would be affected by any likely ignition event.

D. Impact Topics Considered and Dismissed

Threatened and/or Endangered Species

The Endangered Species Act (1973) requires disclosure of impacts on all federally threatened or endangered species. NPS policy also requires the analysis of effects on federal species, as well as state-listed threatened, endangered, candidate, rare, declining and sensitive species.

Two species of Eider, *Somateria fischeri* (Spectacled eider), and *Polysticta stelleri* (Steller's eider) are currently listed as threatened on the Federal Threatened and Endangered Species list. Although not scientifically documented in any of the WEAR management units, the coastline of both Bering Land Bridge and Cape Krusenstern lay within the historic breeding range for these species. Eiders are Sea ducks that live primarily in ocean waters. During breeding however they use inland waters where they nest on tundra near small ponds. Fire likely has little effect on these species and in fact USFWS personnel have little concern of direct impacts of fire suppression activities on the species. FWS does hold concerns for suppression activities that occur in the terrestrial environment that have the potential to effect the marine environment (i.e. retardant use). National fire policy states clearly that, "Fire retardant will not be dropped within 300 feet of waterways." (Interagency Standards for Fire and Fire Aviation Operations 2004) This policy combined with the Limited fire management option strategy employed by the NPS and the limited fire occurrence of the area provides triplicate protection measures to this species to ensure fire management actions do not adversely affect the species. The USFWS concurs with the NPS on this subject and has granted dismissal of these species from the EA. Funding has been requested to further study these species and survey for their presence within WEAR.

Further federally threatened and endangered species include the endangered *Balaena mysticeus* (Bowhead whale). According to the NOAA fisheries service, the range of these marine mammals and their occupation of distant offshore habitats leave these species unthreatened by fire and fire suppression activities.

Although not federally threatened or endangered, there are a number of plant species that are considered rare to land managers (see National Heritage Program AK Rare Plant List) within Alaska. Of current species listed five are believed to occur in WEAR. These species are; *Oxytropis kobukensis* (Kobuk locoweed), *Oxytropis arctica* var. *barnebyana* (Barneby's locoweed), *Artemisia senjavinensis* (Bering

Sea wormwood), *Douglasia beringensis* (Bering Sea douglasia), and *Rumex krausei* (Cape Krause sorrel). All of the species mentioned above occupy specific micro-sites in mostly rocky or sandy soils, gravel bars, scree slopes or rock outcrops. Because of site occupation it is believed that fire in most years will not burn in these types of environments, thus posing little threat to the aforementioned species except under the most severe drought circumstances when fire behavior supercedes normal activity. Moreover, WEAR is home to 33 additional species included in the globally rare NP Species database.

Environmental Justice. Executive Order 12898.

Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations requires all federal agencies identify and address disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. This project would not be expected to result in significant changes in the socioeconomic environment of the project area, and, therefore, would not be expected to have any direct or indirect impacts to minority or low-income populations or communities.

II. RANGE OF ALTERNATIVES

A. Introduction

Each alternative consists of a different combination of the fire management strategies as mandated by NPS Director's Order 18 (DO-18), with each alternative representing a different application of fire as a management tool. The considered alternatives differ in their respective approaches to the management of wildland ignitions and in their allowance or preclusion of prescribed fire.

B. Actions Common to all Alternatives

Under each alternative, mechanical fuel reduction may be used to mitigate hazard fuel buildup or recreate historical landscapes/conditions in areas where prescribed fire or wildland fire would pose an unreasonable threat to the property or resources.

All fire management actions at Western Arctic National Parklands will be conducted in full compliance with local, state, and interstate air pollution control regulations as required by the Clean Air Act, 42 U.S.C. 7418. Currently, no local or interstate air pollution control regulations exist in Alaska.

WEAR will employ three primary strategies in order to protect archeological, cultural, and historic sites from damage by fire or fire suppression activities. First, culturally significant structures will be assigned Critical or Full Protection status, as dictated by the recommended criteria for fire protection of structural resources within WEAR. Second, personnel conducting detection and/or reconnaissance flights within WEAR will be directed to remain alert for the presence of any undiscovered cultural sites or structures and to report their presence to the Western Area FMO. Third, designated Incident Commanders will consult with appropriate resource advisors regarding the identification and sensitivity of previously unknown sites, and will cooperate with the Agency Advisor to mitigate any damage to such sites.

Certain fire suppression activities could pose a threat to fragile soil layers and to other ecosystem components. This type of risk will be mitigated through the use of minimum impact suppression tactics as specified by NPS policy.

C. Alternatives

Alternative 1: Wildland Fire Suppression

Natural ignitions occurring in certain areas and under predetermined conditions would be managed for the accomplishment of resource management goals, including the preservation of fire in its natural role and the reduction of hazardous accumulations of burnable vegetation. Any fire posing a threat to life or property would be immediately suppressed. The suppression response is described in the Alaska Interagency Wildland Fire Management Plan. Prescribed fires would not be implemented.

Alternative 2: Combination of Prescribed Fire Use, Wildland Fire Use, and Wildland Fire Suppression (NPS Preferred Alternative and No Action Alternative)

All three of the major management actions (Wildland Fire Suppression, Wildland Fire Use and Prescribed Fire) described under DO-18 would be allowed, as determined by a combination of pre-established and incident-specific decision making criteria. This alternative represents no change in the on-the-ground implementation of fire management activities; however, it does define the strategy for Wildland Fire Use. Wildland fires that do not pose a threat to life, property, or significant resources would be managed for the accomplishment of resource management goals, including the preservation of fire in its natural role and the reduction of hazardous accumulations of burnable vegetation. Prescribed fire would be implemented, in certain cases, under the direction of National Park Service personnel for the purpose of reducing hazardous fuel loads. Suppression would continue in or near developed areas and near WEAR boundaries when neighboring administrative units with different fire management objectives adjoin NPS land. In areas known to contain fire sensitive cultural and/or archeological resources that warrant protection, or whenever insufficient resources are available to ensure the effective, long-term management of wildland fire to meet resource management objectives, suppression action would continue.

D. Alternatives Considered but Rejected

Full Wildland Fire Suppression

All ignitions, including those of natural origin, would be suppressed and no prescribed fire would be implemented. Reduction of flammable vegetation would be accomplished strictly by mechanical means (e.g. through the use of chain saws, cross cut saws or other tools). Mechanical reduction would be limited primarily to the protection of historic and/or archeological sites and Park/Preserve boundary areas. In some cases, however, mechanical reduction could be used to restore selected landscapes to historic conditions.

This alternative is rejected for the following reasons: 1) the increased risk of catastrophic wildland fire which would result from the exclusion of the area's natural burn cycle; 2) the prohibitively high cost of large-scale mechanical fuel reduction; 3) non-conformance with the existing interagency management scheme and a potential to cause an impairment of park resources and values.

Full Wildland Fire Suppression and Prescribed Fire

All ignitions, including those of natural origin, would be suppressed. The effects of natural wildland fire would be simulated through the use of planned ignitions conducted by park personnel in defined zones. Such fires would be ignited under predetermined fuel and weather conditions; control problems would thereby be minor.

This alternative is rejected for the following reasons: 1) the inability to maintain a natural burn cycle through only prescribed burns; 2) the increased risk of catastrophic wildland fire which would result from the exclusion of the area's natural burn cycle; 3) the prohibitively high cost of large-scale mechanical fuel

reduction and prescribed burns; 4) non-conformance with the existing interagency management scheme and a potential to cause an impairment of park resources and values.

E. Environmentally Preferred Alternative.

Alternative 2 is the environmentally preferred alternative because it provides the full spectrum of fire management strategies and practices to accomplish WEAR fire and resource management objectives while protecting human life and identified resources/values. The potential use of prescribed fire would permit managers to reduce the risk of catastrophic fires around important cultural resource sites as well as limiting the severity of fire in natural resource areas such as floodplain forests.

III. AFFECTED ENVIRONMENT

A. Introduction

Western Arctic National Parklands encompasses 11.8 million acres. Within its boundary, the land exhibits complex ownership patterns with native and regional village corporations' land, allotments, and various mining claims. Located in the Northwest corner of Alaska, this management area is remote even by Alaska standards. Access ranges from private and chartered aircraft year round to motorized and non-motorized boats and ATVs in the summer to snow machine and sled dogs during ice and snow covered months. Numerous native villages surround the Western Arctic Parklands along major river corridors and coastlines where transportation options are not limited to aircraft travel. WEAR administrative offices are in the town of Kotzebue, located on the tip of the Baldwin Peninsula that protrudes into Kotzebue Sound and Nome on the southwestern coast of the Seward Peninsula. With regular air service to Anchorage, Kotzebue and Nome serve as the major transportation hub for travel from all villages in Northwest Alaska.

B. Natural Environment

WEAR covers a vast expanse of ecotypes and terrain features within its boundaries. The interior units (Noatak and Kobuk Valley) both encompass vast portions of watersheds of two of the largest rivers systems in Northwest Alaska. Rugged mountains, rolling hills and even sand dunes are found within these interior units. Displays of various tundra communities, healthy riparian areas and the northernmost extent of boreal spruce forest in Alaska typify vegetation. The coastal units within WEAR (Bering Land Bridge and Cape Krusenstern) display quite different terrain and vegetative features. Comprised mostly of coastal plains and plateaus these areas support large expanses of wet and moist tundra types. Areas with some elevation support a drier alpine form of tundra and trees of any type are virtually non-existent (with the exception of localized pockets of white spruce in the southeast corner of Cape Krusenstern).

Much of WEAR is underlain by permafrost that can average several hundred feet thick, with the top of the permafrost layer often occurring as little as 2 to 3 feet below the ground surface at the peak of summer. Permafrost hinders subsurface drainage, causing unstable soil conditions on sloping surfaces. Consequently, when surfaces are disturbed and permafrost is allowed to melt, soils often collapse.

The climate in WEAR consists of four distinct seasons with relatively short cool summers and long severe winters. Spring and autumn come and go rapidly with the quick increase and decrease in sunlight and temperature. Major portions of the management area receive continuous sunlight during the summer for approximately 30 days.

Numerous species of large and small mammals occur within WEAR. Large mammals include various marine life, Dall sheep, moose, muskoxen, caribou, wolves and black, brown, and polar bear. Smaller mammals, such as arctic hare, wolverine, porcupine, weasel, land otter, ground squirrel, muskrat, vole, lemming, and many others are abundant throughout the park area. In addition, over 25 species of fish and 140 species of bird are also present in WEAR on a seasonal basis.

C. Cultural Environment

Radiocarbon dating has revealed that Western Arctic National Parklands (WEAR) contains at least an 11,000-year record of human occupation, from the time of the Paleo-Indian big game hunters to the present. The modern day Iñupiat Eskimo of the region harvests subsistence within the Parks, as nine Iñupiat Nations did at the time of Euro American contact.

Although less than 1% of the 11.8 million-acre area has been surveyed by archeologists, over 1600 sites have been identified. The majority of these sites are prehistoric, varying from small lithic scatters to large villages with semi-subterranean houses. Only a small number of combustible structures are present.

D. Historical Role of Fire

Fires are infrequent occurrences in the coastal management units of WEAR. Although according to fire history records, on severe drought and active fire years fires have burned in and around both Bering Land Bridge and Cape Krusenstern. However, the two more continental units (Noatak, Kobuk Valley) see more significant fire activity most years. Major portions of the Noatak and Kobuk Valley lie within the northernmost belt of Interior Alaska, where fire has played a critical role in ecosystem sustainability. (See Appendix S.1: Fire Statistics & Graphs)

Fire has been a driving force in the Alaskan interior and arctic for thousands of years. It is a key environmental factor in these cold-dominated ecosystems. Periodic fires have served to select plants and animals that are adapted to fire-caused change. Without fire, organic matter accumulates, the permafrost table rises, and ecosystem productivity declines. Vegetation communities become much less diverse, and their value as wildlife habitat decreases.

Fire rejuvenates these systems. It removes some of the insulating organic matter and elicits warming of the soil. Nutrients are added both as a result of combustion and by increased decomposition rates. Vegetative re-growth quickly occurs, and the cycle begins again.

The impact of aggressive suppression on the Alaskan interior at large and WEAR in particular is, difficult to assess. Organized suppression has occurred on a large scale in Alaska since 1939; however, effects of suppression efforts are not clear. Alaska fire management personnel postulate that the fire ecology of the area may be relatively unchanged from its condition prior to the development of organized suppression efforts.

E. Wildland Fire Management Situation

The seasonal fire cycle in the Alaskan interior consists of four “micro” seasons or phases, each varying with the changing weather patterns and the stages of vegetation development for the growing season. The first begins in mid-May with the loss of snow cover, and ends in late May or early June when green-up begins. During the transition from 100% winter-cured fuels to green-up, human-caused fires occur frequently. These fires are usually relatively easy to suppress. Spring fires that are not suppressed, however, often grow later in the season as fuels become dryer. The second and third fire-cycle phases are primarily lightning driven. Suppression of such fires is harder. Fires occurring in June, the second

period, usually do not develop the intensity of later summer fires; during hot, dry, and windy conditions, however, June wildland ignitions can result in extreme fire behavior. The third period of fire activity begins in mid-July and runs through the first part of August. This is the period of maximum fire activity. The final micro-season runs from late August into early September. These fires are generally easy to control except during particularly dry autumn weather.

IV. ENVIRONMENTAL CONSEQUENCES

A. Impacts of Alternatives

Alternative 1. Wildland Fire Use and Wildland Fire Suppression

Vegetation and Biodiversity

Certain wildland fires would be managed for the accomplishment of resource management goals, including the preservation of fire as a natural process and the reduction of burnable vegetation therefore maintaining a naturally functioning ecosystem. However, in the Full Protection Units the exclusion of prescribed fire may result in an unacceptable increase in vegetation thereby increasing the threat to the resources found within these units.

A purpose of WEAR is to “protect and interpret examples of arctic plant communities... study, the process of plant and animal migration, including man, between North America and the Asian Continent and... to assure the continuation of geological and biological processes unimpaired by adverse human activity.” Fire is an inextricable component of the fire dependant ecosystem of this area and is known to maintain a balanced, naturally functioning ecosystem. This alternative would manage ignitions within established resource objectives to maintain the natural function of the ecosystem in the WEAR.

Conclusion: Minor impacts are expected with the use of this alternative due to an increase in vegetation resulting from no prescribed fire. The level of impacts to vegetation and biodiversity anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Cultural Resources

The prohibition of prescribed fire could hamper the protection of historic and/or archeological resources and the restoration and/or protection of historic landscapes and conditions. Mechanical techniques employed in place of prescribed fire would tend to be more expensive, possibly more destructive, and may not sufficiently mimic the effects of fire. However, certain wildland fires would be managed for the accomplishment of resource management goals including the role of natural processes thereby better protecting the cultural resources from catastrophic fire.

A purpose of WEAR is “to protect and interpret archeological sites associated with Native cultures... to provide for scientific study of the process of ancient human populations of the area ... to provide for archeological and paleontological study, ...and in cooperation with Native Alaskans, to preserve and interpret evidence of prehistoric and historic Native cultures.”

Conclusion: Minor impact would occur due to an increase in vegetation resulting from no prescribed fire. The level of impacts to cultural resources anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Aesthetics and Recreation

Under this alternative, impacts would include the occasional closure of specific areas due to fire activity or smoke concentrations for the safety of visitors resulting in an inconvenience for the visitors or cause them to alter their plans. Smoke will for short time periods degrade visibility which also may inconvenience visitors or cause them to alter their plans. Fire naturally occurs within WEAR ecosystems and degradation in air quality as the result of smoke is part of the function of a fire dependent ecosystem.

Through careful application of mechanical clearing to reduce hazardous fuels minor aesthetic impact may occur in the form of thinning vegetation.

Conclusion: This alternative may result in a minor impact by closing certain areas temporarily and more vegetation may be burned decreasing aesthetics in limited areas. The level of impacts to aesthetics and recreation anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Local Economy

There would be a slight influx of revenue for businesses in communities near an incident resulting from occasional suppression operations. Conversely, closures of areas due to wildfire activity may affect recreational oriented businesses.

Conclusion: Fire management in WEAR under this alternative is expected to have a minor beneficial impact to the local economy.

Wetlands and Floodplains

There would be a minor impact to these areas due if fire suppression operations occur (handline construction). There may be impacts due to erosion after fire has burned through a wetlands or floodplain. Once vegetation in these areas re-establishes erosion is expected to return to normal levels.

Fire is an inextricable component of the fire dependent ecosystem of this area and is known to maintain a balanced, naturally functioning ecosystem. Managing wildland fire within established resource objectives would encourage the natural function of the ecosystem in WEAR.

Conclusion: There would be temporary minor impacts due to a loss of vegetation and temporarily increased erosion. The level of impacts to wetlands and floodplains anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or is critical to the natural or cultural integrity of the park.

Subsistence Use and Wildlife Habitat

A short-term impact on game species and plants in specific areas could occur due to the decrease of vegetation within burned areas. However, this alternative would more adequately facilitate the long-term preservation of the area's natural processes by allowing fire to play its natural role in the ecosystem. Suppression actions may adversely affect subsistence activities during the life of the incident by the increase of human activity and air traffic in the immediate area.

Conclusion: There is no critical and a relatively low percentage of full protection lands within WEAR, thus limiting negative impacts as a result of suppression actions. This would not disrupt the natural function of the ecosystem in WEAR, therefore maintaining wildlife habitat and subsistence use within the management area. There would be a negligible short-term impact resulting from a displacement of wildlife in the burned area. This, however, would replicate a naturally functioning ecosystem and subsistence regime. The level of impacts to subsistence and wildlife habitat anticipated from this

alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Air Quality

Under this alternative, smoke would be monitored for trajectory, mixing height, and impact to overall air quality. Certain wildland fires would be managed for the accomplishment of resource management goals, including the preservation of fire in its natural role. This would reduce the possibility of catastrophic fire thereby reducing the chance for long-term, intense decrease of air quality.

Conclusion: No long term impacts to air quality are expected. The level of impacts to air quality anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are critical to the natural or cultural integrity of the park.

Water Quality and Fisheries

Under this alternative certain wildland fires would be managed for the accomplishment of resource management goals including the preservation of fire in its natural role and the reduction of burnable vegetation. This would result in a greater number of low-intensity wildland fires thereby reducing the potential for erosion along streams.

Selection of this alternative would not disrupt the natural function of the ecosystems within WEAR. A fire is a common occurrence in this ecosystem and does result in some erosion, affecting water quality and fisheries habitat. Under this alternative, the amount of erosion is expected to continue at the same natural level and will not result in an impairment of the stated park purpose.

Conclusion: Long term impacts to water quality and fisheries are not expected. Short-term negligible impacts of increased sedimentation may occur initially after the fire and prior to reestablishment of vegetation. The level of impacts to water quality and fisheries anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Wilderness Resource Values

Under this alternative certain wildland fires would be managed for the accomplishment of resource management goals including the preservation of fire as a natural process.

Vast amounts of WEAR are designated wilderness or are suitable for such designation. The wilderness character of the area reflects natural conditions and a vast undeveloped sub-arctic landscape without permanent human residence. A sense of solitude and distance from modern civilization and its modifications of the natural world dominate the recreational experience. Under this alternative natural fire would be allowed to continue and would continue as an integral part of the wilderness experience.

Conclusion: Long-term impacts to wilderness resource values are not expected. Short-term impacts during fire suppression activities may occur but will be mitigated by adhering to special concerns outlined in the WEAR FMP and by the use of minimum tool/minimum requirement analysis. The level of impacts to wilderness character anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are critical to the natural integrity of the park.

Alternative 1, Cumulative Impacts: The on-going and future activity that would have a cumulative effect on resources of concern within and outside of WEAR unit boundaries analyzed in this Environmental Assessment is the adjacent landowners' fire management option selection. All public land management

agencies in Alaska are signatories of the Alaska Interagency Fire Management Plan, which allows for fire to burn on the landscape in limited suppression units. Much of the public lands surrounding WEAR is in a limited suppression unit and may result in multiple large fires in the area, especially with an increase in vegetation due to no prescribed burns. The results of these multiple fires may be greater than fires managed just within WEAR boundaries.

Alternative 2. Prescribed Fire Use, Wildland Fire Use, and Wildland Fire Suppression (NPS Preferred Alternative)

Vegetation and Biodiversity

Alternative 2 would have the least impact on vegetation with the maximum potential for maintaining diversity, by way of careful implementation of prescribed fire in areas ill suited to Wildland Fire Use. Wildland fire that poses a potential threat to life, property, or sensitive resources would be suppressed, while continued implementation of Wildland Fire Use in remote portions of WEAR would ensure the cost-effective preservation of the area's natural fire ecology as well as the reduction of potentially dangerous fuel loads.

A purpose of WEAR is to “protect and interpret examples of arctic plant communities... study, the process of plant and animal migration between North America and the Asian Continent and... to assure the continuation of geological and biological processes unimpaired by adverse human activity” Fire is an inextricable component of the environment of this area and is necessary to maintain a balanced, naturally functioning ecosystem. Selection of this alternative to use prescribed fire; Wildland Fire Use within established resource objectives, and wildland fire suppression would result in a natural functioning ecosystem within WEAR.

Conclusion: A balanced and naturally functioning ecosystem would be maintained with the use of this alternative. The level of impacts to vegetation and biodiversity anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Cultural Resources

There would be improved long-term protection of registered and unregistered cultural resources with the use of prescribed fire near and surrounding cultural resources. The occasional use of prescribed fire would allow a relatively cost-effective means of reducing fuel loads and preserving historic landscapes and conditions where the presence of values to be protected prohibits the implementation of Wildland Fire Use.

Conclusion: Long-term protection of registered and unregistered cultural resources would result from this alternative. This is anticipated to not result in an impairment of park resources, fulfilling specific purposes identified in the establishing legislation, or is key to the natural or cultural integrity of the park.

Aesthetics and Recreation

The impacts would be similar to Alternative 1 with the addition of the occasional use of prescribed fire that would allow a relatively cost-effective means of reducing fuel loads where the presence of values to be protected prohibits the implementation of Wildland Fire Use.

Conclusion: This alternative may result in minor impacts by closing certain areas and some vegetation may be burned decreasing aesthetics in limited areas. The level of impacts to aesthetics and recreation anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Local Economy

The impacts would be similar to Alternative 1 with the addition that the occasional use of prescribed fire would allow a relatively cost-effective means of reducing fuel loads where the presence of values to be protected prohibits the implementation of Wildland Fire Use.

Conclusion: The increase in revenue to communities supporting fire management operations would result in a minor beneficial impact.

Wetlands and Floodplains

The impacts would be similar to Alternative 1 with the addition that the occasional use of prescribed fire would allow a relatively cost-effective means of reducing fuel loads where the presence of values to be protected prohibits the implementation of Wildland Fire Use.

Conclusion: There would be temporary minor impacts due to a loss of vegetation. The level of impacts to wetlands and floodplains anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Subsistence Use and Wildlife Habitat

The impacts would be similar to Alternative 1 with the addition of the occasional use of prescribed fire would also allow a relatively cost-effective means of reducing fuel loads where the presence of values to be protected prohibits the implementation of Wildland Fire Use.

Conclusion: The natural function of the ecosystems within WEAR would not be disturbed, therefore maintaining wildlife habitat and subsistence use within the Park/Preserve. There would be a minor short-term impacts resulting from a displacement of wildlife in the burned area. This, however, would replicate a naturally functioning ecosystem and subsistence regime. Additional impacts may result from suppression actions; however, limited acreage of critical and full protection designation minimizes suppression needs. The level of impacts to subsistence and wildlife habitat anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Air Quality

The impacts would be similar to Alternative 1 with the addition of the occasional use of prescribed fire would allow a relatively cost-effective means of reducing fuel loads where the presence of values to be protected prohibits the implementation of Wildland Fire Use. Fire is a naturally occurring event in the WEAR ecosystem. Degradation in air quality at the levels expected would be similar to a natural occurrence.

Conclusion: No long-term impacts to air quality are expected. The level of impacts to air quality anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the park.

Water Quality and Fisheries

The impacts would be similar to Alternative 1 with the addition of the occasional use of prescribed fire that would allow a relatively cost-effective means of reducing fuel loads where the presence of values to be protected prohibits the implementation of Wildland Fire Use.

Selection of this alternative would not disrupt the natural function of the ecosystem within WEAR. Fire is a common occurrence in this ecosystem and does result in some erosion, affecting water quality and fisheries habitat. The erosion is expected to continue at the same natural levels.

Conclusion: Long term impacts to water quality and fisheries are not expected. Short-term negligible impacts of increased sedimentation may occur initially after the fire and prior to reestablishment of vegetation. The level of impacts to water quality and fisheries anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are key to the natural or cultural integrity of the management area.

Wilderness Resource Values

The impacts would be similar to Alternative 1 with the addition of the occasional use of prescribed fire that would allow a relatively cost-effective means of reducing fuel loads where the presence of values to be protected prohibits the implementation of Wildland Fire Use.

The wilderness character of the area reflects natural conditions and a vast undeveloped sub-arctic landscape without permanent human residence. A sense of solitude and distance from modern civilization and its modifications of the natural world dominate the recreational experience. Under this alternative natural fire would be allowed to continue and will not result in an impairment of the stated park purpose.

Conclusion: Long-term impacts to wilderness character are not expected. Short-term impacts during fire suppression activities (e.g. surface disturbance by handline construction) may occur but will be mitigated by adhering to special concerns outlined in the WEAR FMP and by the use of minimum tool/minimum requirement analysis. The level of impacts to wilderness character anticipated from this alternative would not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or are critical to the natural integrity of the park. key

Alternative 2 Cumulative Impacts: The on-going and future activity that would have a cumulative effect on resources of concern within and outside of WEAR boundaries analyzed in this Environmental Assessment is the adjacent landowners' fire management option selection. All public land management agencies in Alaska are signatories of the Alaska Interagency Fire Management Plan, which allows for fire to burn on the landscape in the limited suppression option. Much of the public lands surrounding WEAR are in a limited suppression option, which has the potential to result in multiple large fires in the area. The results of these multiple fires may be greater than fires managed just within WEAR boundaries.

B. Cumulative Impact Mitigation

The convening of a Multi-Agency Coordinating (MAC) group can mitigate potential cumulative impacts. As directed in the Alaska Interagency Fire Management Plan, "A statewide Multi-Agency Coordinating (MAC) group may be convened to implement a temporary change from the selected management options for a specific geographic area(s) during periods of unusual fire conditions (e.g., numerous fires, predicted drying trends, smoke problems, unusually wet conditions or suppression resource shortages)."

C. IMPACTS OF ALTERNATIVES SUMMARY

	Alternative 1: Wildland Fire Use and Wildland Fire Suppression	Alternative 2 (Preferred): Prescribed Fire Use, Wildland Fire Use, and Wildland Fire Suppression
Vegetation and Bio- diversity	Minor impact: continued potential for minimal loss of diversity through fire exclusion in or near Critical and Full Protection Units and sites.	Least impact: maximum potential for diversity through careful implementation of prescribed fire in areas ill-suited to Wildland Fire Use.
Cultural Resources	Minor impact: Increased potential for uncontrolled fire due to increased fuels through fire exclusion in or near Critical and Full Protection Units and sites.	Improved long-term protection of registered and unregistered historic and/or archeological sites; improved maintenance of historical landscapes and conditions.
Aesthetics and Recreation	Minor impact: occasional closures of specific areas; vegetation burned may decrease aesthetics.	Minor impact: occasional closures of specific areas; vegetation burned may decrease aesthetics.
Local Economy	Minor impact	Minor impact
Wetlands and Floodplains	Minor impact: may be some erosion until vegetation returns.	Minor impact; may be some erosion until vegetation returns.
Subsistence Use and Wildlife Habitat	No long-term impact; some potential for short-term displacement of game from specific areas.	No long-term impact; some potential for short-term displacement of game from specific areas.
Water Quality and Fisheries	No long-term impact; some short-term erosion.	No long-term impact; some short-term erosion.
Air Quality	Minor impact.	Minor impact.
Wilderness Character	No long-term impact; some short-term impact from fire suppression activities.	No long-term impact; some short-term impact from fire suppression activities.

V. COORDINATION AND CONSULTATION

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Appendix D.3.b: ANILCA 810

ANILCA Title VIII Section 810 (a) Summary Evaluation and Findings

I. INTRODUCTION

This section was prepared to comply with Title VIII, Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). It summarizes the evaluations of potential restrictions to subsistence activities that could result from the implementation of the proposed fire management plan in Western Arctic National Park Lands (WEAR).

II. 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 affected until the head of such Federal agency—

- (1) gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805;
- (2) gives notice of, and holds, a hearing in the vicinity of the area involved;
and
- (3) determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity will involve the minor amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.

In 1980, ANILCA created new units and additions to existing units of the national park system in Alaska. Four units that now comprise WEAR were created by ANILCA:

Bering Land Bridge National Preserve: Section 201[2] “To protect and interpret examples of arctic plant communities, volcanic lava flows, ash explosions, coastal formations and other geological 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;...to continue reindeer grazing use...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 the outdoor recreation and environmental education activities including public access for recreational purposes to the Serpentine Hot Springs area.”

Cape Krusenstern National Monument: SECTION 201[3] “ To protect and interpret a series of archeological sites depicting every known cultural period in arctic Alaska; to provide for scientific study of the process of human population of the area from the Asian Continent, in cooperation with Native Alaskans, to preserve and interpret evidence of prehistoric and historic Native cultures, to protect habitat for seals and other marine mammals; to protect habitat for and populations of birds, and other wildlife, and fish resources; and to protect the viability of subsistence resources...”

Kobuk Valley National Park: SECTION 201[6]“ To maintain the environmental integrity of the natural features of the Kobuk River Valley, including the Kobuk, Salmon and other rivers, the boreal forest, and the Great Kobuk Sand Dunes, in an undeveloped state, to protect and interpret, in cooperation with Native Alaskans, archeological sites associated with Native cultures; to protect migration routes for the Arctic caribou herd; to protect habitat for, and populations of, fish and wildlife including but not limited to caribou, moose, black and grizzly bears, wolves, and waterfowl and to protect the viability of subsistence resources.”

Noatak National Preserve: SECTION 201[8a] “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 potential for significant restriction to subsistence resources 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 them.

III. PROPOSED ACTION ON FEDERAL LANDS

The National Park Service requires every administrative unit with burnable vegetation to develop a fire management plan—a unit-specific document outlining fire management goals and describing the policies and actions by which these goals will be realized (Director’s Order 18). Since 1983, the WEAR fire management program has operated under the jurisdiction of various statewide interagency documents, including the Alaska Interagency Wildland Fire Management Plan, or AIWFMP (1998). Under the AIWFMP, fire protection needs at Western Arctic Parklands are determined by NPS and Bureau of Land Management (BLM) managers; lands within WEAR are categorized as **critical**, **full**, **modified**, or **limited** protection, depending on the proximity of values to be protected and on overall resource management objectives.

The proposed action consists of the establishment of a Fire Management Plan for Western Arctic National Parklands. The preferred alternative and the other considered alternatives (see Appendix C1, Environmental Assessment, this document) specify continued adherence to the AIWFMP as well as compliance with recently developed National Park Service directives. Specifically, NPS Director’s Order 18 mandates a distinction between **prescribed fire** (planned and implemented by management) and **wildland fire** (unplanned ignitions), with wildland fire incidents further categorized, in turn, as either Wildland Fire Use or wildland fire **suppression**. Each of the considered alternatives mandates a specific configuration of DO-18 management options and relates these options to the policies and procedures outlined in the AIWFMP.

The preferred alternative allows for the continued management of wildland fire at Western Arctic National Parklands through a combination of wildland fire suppression, Wildland Fire Use, and prescribed fire use. This statement of Summary Evaluations and Findings addresses the impact of these fire management policies and actions on subsistence activities within the management area.

IV. AFFECTED ENVIRONMENT

A summary of the affected environment pertinent to subsistence uses is presented here.

WEAR is a management unit which includes Noatak National Preserve, Cape Krusenstern National Monument and Kobuk Valley National Park near Kotzebue, AK and Bering Land Bridge National Preserve located on the Seward Peninsula near Nome, AK. WEAR lies within the boundaries of wildlife management units 22, 23, and 26 where subsistence uses are allowed in accordance with Title VIII of ANILCA. Subsistence activities occur throughout the year and are usually concentrated along the coastlines and in major river corridors in WEAR. Subsistence pursuits occur often without regard to political boundaries.

In Cape Krusenstern National Monument and Kobuk Valley National Park to be eligible for subsistence uses you must be a local rural resident living in the NPS designated resident zone (community/area within the park or monument); or have a special subsistence use permit (36 CFR 13.44) issued by the Superintendent. The communities of Kivalina, Kotzebue and Noatak are included in the resident zone at Cape Krusenstern National Monument. The communities of Ambler, Kiana, Kobuk, Kotzebue, Noorvik, Selawik and Shungnak are included in the park's resident zone at Kobuk Valley National Park. Individuals residing outside of the NPS designated resident zone who have a personal or family history of using the park/monument for subsistence purposes at the time ANILCA was passed, may obtain a special subsistence use permit (36 CFR 13.44) from the Superintendent.

Bering Land Bridge National Preserve and Noatak National Preserve are also open to non-subsistence (sport) hunting, fishing and trapping. ANILCA protects subsistence uses by local rural residents as a priority consumptive use over other non-subsistence consumptive.

Cape Krusenstern National Monument is located on the western shore of northwest Alaska just north of Kotzebue and contains approximately 659,807 acres. It is characterized by a low-lying, coastal plain dotted with sizable lagoons and backed by gently rolling, limestone hills. The Monument's bluffs and series of 114 beach ridges contain a chronological record of an estimated 6,000 years of prehistoric and historic uses by the region's residents. Shifting sea ice, ocean currents, and waves shape the dynamic coastline and annual openings and closing of lagoon outlets. The broad plain between the cape and the hills is tundra covered and contains such features as pingos, eskers, frost polygons, thermokarst lakes, and ice lenses. Five complete, though small, arctic river systems are important resources that influence the dynamics of the Monument's ecosystem. The entire monument is open to subsistence uses in accordance with Title VIII of ANILCA. Caribou are hunted in the Mulgrave Hills and in the Kakagrak Hills south of Kilikmak Creek and north of Krusenstern Lagoon. Dolly Varden fishing occurs in lower Rabbit Creek.

Kobuk Valley National Park is located in northwest Alaska and contains approximately 1,726,500 acres. It encompasses a nearly enclosed mountain basin on the middle section of the Kobuk River. Trees approach their northern limit in the park, where forest and tundra meet, creating a mosaic of forest and open tundra. Thousands of caribou funnel through mountain passes and cross the Kobuk River on their spring and fall migrations. Salmon and arctic char migrate to spawning grounds within the park. These and other seasonally abundant plant and animal resources have made the middle section of the Kobuk

River favorable for human occupation and use. Native people have hunted, fished, and lived along the Kobuk River for at least 12,500 years, and subsistence use of the resources in the Kobuk Valley continues into the present. The entire park is open to subsistence uses in accordance with Title VIII of ANILCA.

Noatak National Preserve covers 6,574,481 acres in northwestern Alaska. The Noatak River originates in Gates of the Arctic National Park and Preserve to the east, and flows westward through the Noatak River basin that makes up the central portion of the preserve. Major subsistence resources found in the preserve include caribou, moose, Dall sheep, grizzly bear, wolf, fox, lynx, marten, beaver and muskrat. Small mammals such as the hoary marmot, arctic ground squirrels, lemmings and porcupine also exist within the preserve. A variety of bird life inhabits the preserve, particularly during the summer migratory season, when thousands of birds congregate in the arctic for breeding. The Canada goose, white-fronted goose, tundra swan, and all four species of loon are common in the preserve.

The Noatak River is considered key in the subsistence and commercial fisheries harvest for Northwest Alaska. The most common fish, Arctic grayling and Arctic char, are found in the Noatak River and its tributaries. Salmon occur throughout the Noatak drainage system, with Chum being the most abundant, and sockeye, pinks and king found in the lower reaches of the river. Sheefish inhabit the Kobuk and Selawik Rivers in the preserve and are considered a preferred subsistence item. Trout are found in the deeper lakes within the preserve, as are burbot and freshwater cod.

Vegetation within the preserve is predominately low mat tundra. The lower Noatak drainage contains a boreal forest cover. At higher elevations, an alpine tundra community can be found, with willow, heather and combinations of grasses, sedges, wildflowers and mosses. Drier areas support lichens and saxifrages. Moist tundra community occurs along the foothills of the Noatak Valley. This is the predominant vegetation of the preserve and consists of cottongrass, willow, dwarf birch, labrador tea, Lapland rosebay, mountain alder and avens. Bog rosemary and cranberry are found in wetter areas as are salmonberry and a variety of mosses. A spruce forest community, consisting of white spruce, paper birch, aspen, poplar and black spruce, occur sporadically throughout the preserve and are generally located along the south-facing foothills and valley bottoms.

The Bering Land Bridge National Preserve contains 2.7 million acres on the Seward Peninsula. Subsistence uses are an essential part of the lifestyle of most residents of the Seward Peninsula. Subsistence hunting, fishing, and gathering activities are important not only for food, but as a foundation for native traditions, values and cultural identity. Local residents harvest marine mammals, whitefish, sheefish, Dolly Varden; a variety of edible berries, roots and other vegetation; migratory waterfowl, furbearers; and large mammals such as caribou and moose in the preserve. There is extensive subsistence use in the preserve by residents of Shishmaref, with selected areas being used by residents of Kotzebue, Deering, Wales and Nome.

More comprehensive descriptions of the affected environment within can be found in the following NPS documents.

- *General Management Plan, Land Protection Plan, Wilderness Suitability Recommendation, Cape Krusenstern National Monument, 1986.*
- *General Management Plan, Land Protection Plan, Wilderness Suitability Recommendation, Kobuk Valley National Park, 1986.*
- *General Management Plan, Land Protection Plan, Wilderness Suitability Recommendation, Bering Land Bridge National Preserve, 1986.*

The majority of WEAR lies within the Limited Protection Fire Management Unit. Under the proposed action, wildland fire ignitions occurring within this unit would be managed for the accomplishment of

resource management goals, including the preservation of the natural fire regime, and the perpetuation, in turn, of healthy and biologically diverse plant communities and fish and game habitat.

V. SUBSISTENCE USES AND NEEDS EVALUATION

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

The evaluation criteria are:

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

1) Potential to Reduce Populations:

The National Park Service has generally found populations of plants and animals important to subsistence activities to be healthy. However, site-specific information on populations, distribution, and harvest is lacking for many of these species, therefore, recognition of declining populations has been difficult.

The actions that would be implemented under the preferred alternative would be aimed directly at the safe and cost-effective preservation of the area's natural fire ecology. As such, WEAR enactment of the preferred alternative would have a beneficial effect on the long-term viability of plant and animal populations pertinent to subsistence use within WEAR. The occasional displacement of plant and animal populations from specific locales by wildland fire is a natural and inevitable occurrence within the fire-dependent ecosystems of WEAR. Although current populations may experience some adverse effects, usually those effects are greatly offset by the benefits accrued to future generations of populations.

Under the proposed action, land managers could mitigate potential losses to subsistence users through the consideration of hunting and trapping activities in the planning and implementation of Wildland Fire Use and prescribed fire incidents. There are a few users who have permits for the use of public structures within the management area. These structures are protected under Critical Suppression as noted in the accompanying Fire Management Plan (FMP, Section XVI Protection of Sensitive Resources). In the event of loss of or damage to this structure, the Superintendent of the Preserve may permit reconstruction of this structure. However, subsistence use is an important factor in the determination of prescribed fire within WEAR.

2) Restriction of Access:

NPS lands are managed according to legislative mandates, NPS management policies, and guidelines. The proposed action is not anticipated to significantly restrict access of subsistence users to natural resources on NPS lands. Under the proposed action, such restrictions would be minimized by the continual reduction of hazardous fuels on the landscape by allowing fire to fulfill its natural role. This in turn would reduce possibility of widespread, catastrophic fire due to heavy fuel build up, in the future.

3) Increase in Competition:

NPS regulations and provisions of ANILCA provide the tools for adequate protection for fish and wildlife populations on Federal Public lands while ensuring subsistence priority for local rural residents. The enactment of the preferred alternative would not significantly increase competition for the use of subsistence resources. Displacement of plant and animal populations from specific sites would be short-term, and, in fact, in most cases the long-term viability of the populations in question depends directly on the natural processes that the proposed plan is intended to safely perpetuate.

VI. AVAILABILITY OF OTHER LANDS

As stated earlier, wildland fire is an inevitable component of the plant and animal communities of Western Arctic Parklands. Consequently, the availability of other lands is not a pertinent consideration in this particular case.

With respect to the question of subsistence use, the scope and intensity of wildland fire incidents managed for resource benefit (i.e., fire use incidents) will generally be of small significance when considered within the context of overall available acreage. Prescribed fires will be planned and managed so as to avoid any significant hardship to subsistence users.

VII. ALTERNATIVES CONSIDERED

This section discusses the considered alternatives with respect to their respective reduction or elimination of the need to use public lands necessary for subsistence purposes.

Alternative 1 (a combination of prescribed fire use and wildland fire suppression) would perhaps result in the least short-term disruption of subsistence activities, with suppression responses preventing the spread of multiple wildland fire ignitions. The long-term impacts of this alternative, however, would be negative, with the exclusion of wildland fire leading to the gradual decline of biodiversity and viable habitat throughout all areas within WEAR utilized by subsistence hunters and trappers.

Preferred alternative (a combination of Wildland Fire Use, wildland fire suppression, and prescribed fire use) would yield the same favorable long-term effects on lands used for subsistence activities as alternative two, while allowing more effective protection and restoration of significant fire-sensitive sites and/or landscapes.

Alternative 2 (a combination of Wildland Fire Use and wildland fire suppression) would not significantly differ from the preferred alternative with respect to the reduction or elimination of the need to use public lands for the accomplishment of fire management goals.

VIII. FINDINGS

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

National Park Service
U.S. Department of the Interior

Western Arctic National Parklands
WEAR

Alaska



Finding of No Significant Impact

Fire Management Plan Environmental Assessment

September 2004

Recommended:

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Regional Director, Alaska

9/30/04
Date

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Appendix D: Compliance for FMP (continued)

1. *NHPA (Section 106)*
TBA

2. *ESA (Section 7)*
Comments are imbedded in the Environmental Assessment.

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