

Appendix G

Compatibility Determinations

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G. Appropriate Use and Compatibility Determinations

G.1 Introduction to Appropriate Refuge Uses

The National Wildlife Refuge System Improvement Act of 1997 identified six priority wildlife-dependent recreation uses: hunting, fishing, wildlife observation and photography, environmental education, and interpretation. With the exception of these six uses, and with the exception of the taking of fish and wildlife under State regulations, the refuge manager follows the U.S. Fish and Wildlife Service (Service) Appropriate Refuge Uses policy (603 FW 1) to decide if a new or existing use is an appropriate refuge use. If an existing use is not appropriate, the refuge manager will eliminate or modify the use as soon as possible. If a new use is not appropriate, the refuge manager will deny the use without determining compatibility.

A proposed or existing use on a refuge must meet at least one of the following four conditions to be considered appropriate:

1. the use is a wildlife-dependent recreational use identified in the act;
2. the use contributes to fulfilling the refuge purpose(s), the National Wildlife Refuge System (Refuge System) mission, or goals or objectives described in a refuge management plan approved after October 9, 1997, the date the act was signed into law;
3. the use involves the take of fish and wildlife under State regulations; or
4. the refuge manager has evaluated the use following the guidelines in the Service manual and found that it is appropriate.

The comprehensive conservation plan process includes a review of the appropriateness of existing refuge uses and of any planned future public uses. An evaluation of all previously approved uses indicates that those uses are still considered appropriate. Appropriateness findings for those uses reviewed during the Arctic National Wildlife Refuge (Arctic Refuge, Refuge) Comprehensive Conservation Plan (Plan, Revised Plan) process have been documented and included in the Plan's administrative record.

G.2 Introduction to Compatibility Determinations

A compatible use is a proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the Refuge System mission or the purposes of the national wildlife refuge. The refuge manager must find a use is appropriate before undertaking a compatibility review of the use. According to the Service's Compatibility policy (603 FW 2), the refuge manager cannot initiate or permit a new use of a national wildlife refuge or expand, renew, or extend an existing use unless the manager has determined that the use is a compatible use.

Compatibility determinations are based on a refuge-specific analysis of the reasonably anticipated impacts of a particular use on refuge resources. Refuge managers do not independently generate data to make determinations, but rather work with available information, such as field experience and familiarity with refuge resources; information made

available to the refuge manager by the State, tribes, proponent(s) or opponent(s) of the use; or through the public review and comment period. Refuge-specific analysis need not rely on refuge-specific biological impact data but may be based on information derived from other areas or species that are similarly situated and therefore relevant to the refuge-specific analysis. Refuge managers may work at their discretion with the proponent(s) of the use or other interested parties to gather additional information before making the determination. If information available to the refuge manager is insufficient to document that a proposed use is compatible, then the refuge manager would be unable to make an affirmative finding of compatibility and must not authorize or permit the use.

Compatibility determinations are completed as part of a planning process such as a comprehensive conservation plan or step-down management plan. The determinations cover individual uses, specific use programs, or groups of related uses described in the planning document. The compatibility determinations prepared concurrently with the revised Arctic Refuge Plan are hereby incorporated as an appendix to this Plan. The determinations summarize and incorporate by reference the information considered in detail in the Plan and associated Environmental Impact Statement.

DRAFT COMPATIBILITY DETERMINATION

Use: State of Alaska Management Activities

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within the Refuge’s boundaries: secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This compatibility determination addresses the routine management activities conducted by the Alaska Department of Fish and Game (ADFG) and public safety wildlife enforcement officers that are not cooperative projects with the U.S. Fish and Wildlife Service (Service). These projects might not be included in the Master Memorandum of Understanding (or other specific cooperative agreements) between the ADFG (Juneau, Alaska) and the Service (Department of the Interior, Anchorage, Alaska) signed March 13, 1982, and/or law enforcement activities conducted by Alaska wildlife enforcement officers. Routine management activities may include the following: fish and wildlife surveys conducted by boat, foot, or other means not restricted by regulation or policy; aircraft landings in support of fish and wildlife surveys; vegetation and habitat classification and surveys; and law enforcement activities.

This compatibility determination does not address predator management, fish and wildlife control (with the exception of animals taken in defense of life or property), reintroduction of species, native fish introductions, non-native species introductions, non-native species management, pest management, disease prevention and control, fishery restoration, fishery enhancement, construction of facilities, or any other unpermitted activity that could alter ecosystems in the Refuge. Separate compatibility determinations addressing specific proposals will be required for those activities. All management and research activities conducted by ADFG under a specific cooperative agreement with the Service to fulfill one or more purposes of the Refuge or the Refuge System mission are not subject to a compatibility determination.

Potential means of access include fixed-wing aircraft, motorboats, snowmobiles, non-motorized boats, foot, snowshoes, and cross-country skis. Helicopters may also be used when specifically authorized by the Refuge manager. Potential lodging and facilities include tents and other temporary structures, existing permitted cabins, and caches.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage activities at existing and projected levels. Administrative staff time (as many as 10 staff days per year) primarily involves phone conversations, written correspondence, and personal interaction with State personnel regarding ongoing activities. Field work associated with administering the program primarily involves monitoring (when applicable) the State's activities to ensure all activities remain compatible.

Anticipated Impacts of Use(s): Because ADFG and public safety personnel are trained professionals, the Service anticipates that routine law enforcement and fish and wildlife monitoring and management activities would have positive overall impacts on wildlife resources, other resources in the Refuge (such as water quality, soil, and vegetation), and visitors. These positive impacts would support Refuge purposes and goals and the Service mission.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge’s Comprehensive Conservation Plan.

Refuge Determination (check one below):

- Use is not compatible
- Use is compatible

Stipulations Necessary to Ensure Compatibility: A compatibility determination is not required for State activities on lands in the Refuge where a pre-established agreement or memorandum of understanding is in place. Refuge staff will monitor State activities in the Refuge. Findings from these monitoring efforts will be used to determine what additional management actions, if any, would be needed to ensure State activities remain compatible with Refuge purposes and in compliance with established agreements. State administrative activities conducted in designated wilderness areas require completion of a minimum requirements analysis in accordance with national and regional policy.

Justification: The State of Alaska and the Service are partners in the management of many resources on the Refuge. Natural and social science information is necessary for the proper management of the Refuge System. It is the policy of the Service to encourage and support research and management studies to provide scientific data upon which decisions regarding management of units of the Refuge System may be based. The State research, management, and law enforcement activities addressed in the compatibility determination support achieving Refuge purposes and goals, and the System mission, and would have favorable impacts on resources in the Refuge and wildlife-dependent priority public uses. After fully considering the impacts of these activities, as described previously in the “Anticipated Impacts” section of this document, it is my determination that State of Alaska management activities in the Refuge do not materially interfere with or detract from the purposes of the Refuge or the mission of the Refuge System.

Supporting Documents:

U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.

U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.

Master Memorandum of Understanding between the Alaska Department of Fish and Game, Juneau, Alaska, and the U.S. Fish and Wildlife Service, Department of the Interior, Anchorage, Alaska, signed March 13, 1982.

Refuge Determination:

Refuge Manager/

Project Leader Approval

_____ (Signature) _____ Date

Concurrence:

Regional Chief

National Wildlife

Refuge System

_____ (Signature) _____ Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Commercial Air Transportation Services

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. *to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. *to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. *to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. *to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This is a re-evaluation of the compatibility of commercial aircraft operations as a use of Federal lands in Arctic Refuge. This activity was originally found to be compatible in 1988 during the development of the original Arctic Refuge Comprehensive Conservation Plan and again determined to be compatible in 1994, subject to reasonable regulation and special conditions provided with a special use permit.

Commercial aircraft operations support wildlife-dependent priority public uses, and other compatible Refuge uses. The Refuge covers a vast area, providing visitors with seemingly unlimited opportunities to find solitude and experience wilderness. The primary means of access into and out of the Refuge is by aircraft, which can only land where ground topography or lake size are appropriate. The number of useable access sites is therefore limited. Modes of transport often occur in particular river corridors, based on the water volume of the river and the topography of the river valley. Wheeled aircraft are predominantly used throughout the Refuge, particularly on the North Slope, though float planes are occasionally used for access. Commercial aircraft operations considered here include activities occurring throughout the year.

There is currently no limit to the number of trips or clients permittees can take to the Refuge, nor is there a limit to the number of commercial air operators permitted to operate on the Refuge. There is an application period for all commercial aircraft operators requesting a permit. This action prohibits an operator from accepting a number of clients at the last moment and just dropping clients off, producing an overcrowded situation and resulting in a poor quality experience for the client.

Operators are required to submit an annual report of client trips to Refuge lands. The annual report includes information on the primary activity, location, length of stay, group size, and other related items. These reports can provide the most accurate and reliable information the U.S. Fish and Wildlife Service (Service) has on Refuge use by visitors.

The first permit for commercial aircraft operations was issued in 1987. Since that time, the Refuge has issued from 4-10 special use permits annually to commercial air transport businesses desiring to provide transportation services in the Refuge. In most recent years, however, Refuge staff have issued 10-17 air transporter permits annually. These transporters have provided services to an average of 35–45 parties per year, primarily for hunting, fishing, or river floating. The lengths of these trips were typically 7–10 days, although shorter trips sometimes occur.

Refuge visitation has generally remained steady since the late 1980s, averaging around 1,000 visitors per year, yet there has been a steady increase in the number of commercial permits issued. On average, where locations are known, about 77 percent of overall commercially-

supported visitation occurs north of the Brooks Range, while about 23 percent occurs on the south side. Nearly one-quarter (21 percent) of the commercially-supported visitors to the Refuge visit the Kongakut River drainage on the north side of the Brooks Range.

Commercially guided or transported recreational visitors spend, on average, about nine days in the refuge, in groups that average around five individuals. On average, it appears that hunters make up 28 percent, and recreational visitors make 72 percent, of the total number of commercially-supported visitors. Most general hunters use an air-taxi or air transporter to access the Refuge, yet an unknown number of general hunters use their personal airplanes.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage commercial aircraft operations activities at existing and projected levels. Administrative staff time primarily involves issuing permits, ensuring that licenses and certifications are current, collecting client use-day fees, and recording activity data. Field work associated with administering the program primarily involves monitoring permittees' compliance with the terms of their permits. Estimated staff time to annually administer and monitor these permits is one person full-time, all year long.

Anticipated Impacts of Uses: Landing aircraft on non-durable surfaces could cause minor, site-specific, or long-term effects to Refuge habitats and vegetation. To keep this from occurring, we can limit where commercial operators can land. Access to the Refuge during summer months would be by landing aircraft primarily on gravel bars. Winter access would be by aircraft fitted with skis. Landings on vegetated lowland tundra and disturbance to vegetation outside established landing areas would be limited under the stipulations of the special use permit. During the Plan process, some localized vegetation impacts have been reported. Instances of resource degradation caused by aircraft landing on non-durable surface may and have involved further restricting landings at that site to reduce impacts to Refuge resources. The introduction of invasive species could affect Refuge resources, although it is not known to have occurred by this activity in the Refuge to date, and staff will continue to monitor these areas for such occurrences. Temporary displacement and/or disturbance to wildlife can occur in response to low-level overflights and during takeoffs and approaches to landings, but impacts would likely be short-term and minimal.

During peak visitation, limited landing areas in some drainages may contribute to perceived crowding and user conflicts. Additionally, some localized vegetation damage caused by landing on non-durable surfaces has been reported. These are emerging issues that need to be monitored. Future stipulations may be developed to address these concerns.

The Refuge's administrative oversight of the activity and comprehensive State and Federal regulations continually evolve to respond to management needs. Compliance with regulations and permit conditions will be routinely checked by Refuge staff. Refuge law enforcement personnel will also help minimize direct impacts from commercial air transportation services by enforcing compliance with special use conditions.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below): Use is not compatible Use is compatible***Stipulations Necessary to Ensure Compatibility***

A special use permit with the following stipulations is required for commercial air transportation services. These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

1. Failure to abide by any part of this special use permit; violation of any refuge related provision in Titles 43 (Part 36) or 50 (Subchapters B and C) Code of Federal Regulations; violation of the Marine Mammal Protection Act of 1972; violation of the Endangered Species Act of 1973; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for immediate revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., assistants). Appeals of decisions relative to permits are handled in accordance with 50 Code of Federal Regulations 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of this permit.
3. The permittee must maintain, throughout the use period specified on the permit, Comprehensive General Liability Insurance (\$300,000 each occurrence, \$500,000 annual aggregate) covering all ground or water based operations and (unless air transportation is already covered) Aviation Passenger Liability (\$150,000/seat plus \$100,000 property) covering all aircraft operations involving clients
4. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
5. The permittee must notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of annual activities allowed by this permit.
6. Prior to beginning any activities allowed by this permit, the permittee must provide the refuge manager with: (1) the name(s) and method of contact for the lead field guide(s); (2) aircraft and other vehicle types to be used and identification information for these vehicles; (3) names of assistant guides and helpers; and (4) any changes in information provided in the original permit application.
7. The permittee must provide the refuge manager with a Client Use Report of the trip dates, locations, number of clients each trip, number of clients per trip, and number and species of all animals taken (if applicable). The permittee may be required to provide names, addresses, and phone numbers of clients.

8. Client Use Reports must be received by October 15, or within 30 days of permit expiration, whichever date is earliest. For permits valid beyond October 31, partial reports including all activity through October 15 must be received by October 31, and reports for activity between October 16 and the date of the permit's expiration must be received within 30 days of the permit's expiration. Failure to report the actual number of client use days per type of activity on or before the due date, and pay the Service's client use day fees within 30 days after receiving a bill for collection, will be a violation of this permit.
9. This permit authorizes use only on Arctic National Wildlife Refuge lands. Use of land selected by or conveyed to the State of Alaska or North Slope Borough; or a Native corporation or individual is not authorized by this permit.
10. The permittee and permittee's clients do not have the exclusive use of the site(s) or lands covered by this permit, except for the authorized camp facilities (if applicable).
11. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near subsistence hunters, and damage to cabins, trails, traditional campsites, or caches used by subsistence users.
12. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
13. Construction of cabins, platforms, or other permanent structures is prohibited.
14. Use of off road vehicles is prohibited in designated Wilderness areas. Off-road vehicle use in non-Wilderness areas is limited to events specifically authorized in writing and in advance of--and in direct support of--the permitted activity. The use of snowmobiles, dog teams, and other means of surface transportation may only be used when adequate snow cover is present and in such a manner as to prevent waste or damage to the Refuge. The phrase "adequate snow cover" means snow is of a depth to protect the underlying vegetation and soil.
15. Snowmobiles, dog teams, watercraft, and other means of transportation shall be operated in such a manner as to prevent the herding, harassment, hazing, or driving of wildlife for viewing or other purposes.
16. Any human-wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the refuge manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the refuge manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident Report form (Service 2008). Animals taken in defense of life

- or property must be reported to the refuge manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.
17. The operation of aircraft at altitudes and in flight paths resulting in the herding, harassment, hazing, or driving of wildlife is prohibited. It is recommended that all aircraft, except for take-off and landing, maintain a minimum altitude of 2,000 feet above ground level (AGL).
 18. Any action by a permittee or the permittee's employees which unduly interferes with or harasses other refuge visitors or impedes access to any site is strictly prohibited. Examples of prohibited acts include, but are not limited to: 1) intentional low flights over camps or persons at less than 500 feet, except when necessary for take-off and landing; 2) parking aircraft or placing other objects (rocks, tents, etc.) on any landable area so as to restrict use by other aircraft; 3) otherwise intentionally interfering in the activity of other refuge users; 4) engaging in activity which is contrary to State and Federal laws.
 19. In the Kongakut River drainage, permittee landings are limited to non-vegetated surfaces such as gravel bars, barrier islands, ridge tops and other areas with no apparent plant cover when viewed from the air during a normal landing site inspection pass. Water landings are allowed and ski operations may continue where adequate snow conditions exist.
 20. The construction or clearing of landing strips or pads is prohibited. Incidental hand removal of rocks and other minor obstructions may be allowed.
 21. Temporary fuel caches are allowed only in designated areas from 1 May through 30 September. They must be identified on a USGS map (or map photocopy) and submitted for approval in writing by the refuge manager before they are established. Fuel caches must conform to the following:
 - a. No more than 60 gallons can be stored per site.
 - b. Storage must be above the high water line.
 - c. Fuel is limited to aviation gas only.
 - d. Storage must be in containers approved for gasoline and labeled with the permittee's name, address, and type of fuel.
 22. The permittee must maintain their use areas in a neat and sanitary condition. Latrines must be located at least 200 feet from springs, lakes, and streams. All property (except cabins and/or tent frames) of the permittee must be removed from refuge lands upon completion of permitted activities.
 23. The preeminent value of the Arctic Refuge lies in its unsurpassed wilderness condition. The permittee must ensure that all employees and clients seek to minimize the effect of their activities on the wilderness character of the land, wildlife, and the unique experience available there.

All permitted activities that occur within 25 miles of the Beaufort Sea coastline will have the following additional condition:

- The permittee must read the Polar Bear Interaction Guidelines (Guidelines) (Arctic Refuge 2010) to these permit Special Conditions. The Guidelines must also be distributed to all employees and clients of the permittee before engaging in any activities on the Refuge. In addition, the following conditions shall be met:
 - Protection of den sites and minimizing disturbance to sows with small cubs is of critical importance. Guides operating under this permit must become knowledgeable of the signs and behaviors indicating the presence of a den and avoid those areas. No person shall approach, or remain, within one mile of a polar bear den, or of a sow with small cubs. If at any time the permittee becomes aware of signs indicating their close proximity to a polar bear den, or encounters a sow with small cubs, all members of the guided party must immediately retreat to a distance of at least one mile. If, at any time, the location of a den becomes known to the permittee, no approach shall be made closer than one mile. When operating within 25 miles of the Beaufort Sea coastline, the permittee will store attractants (human food, dog food, garbage, etc.) in “bear-resistant” containers to minimize attracting polar bears and avoid conditioning bears to human food. Containers must be approved as “bear-resistant.” Information about certified “bear resistant” containers can be found at http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf
 - Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.
 - Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.

Justification: The objective of allowing commercial aircraft operations in national wildlife refuges is to make available a variety of quality opportunities for the public to hunt, fish, or enjoy outdoor activities where such activities are compatible with the Refuge’s purposes, resources, and management objectives. The congressional committee report on the National Wildlife Refuge System Improvement Act of 1997 states: “It establishes as the policy of the United States that wildlife-dependent recreation, when it is compatible, is a legitimate and

appropriate public use of the Refuge System, through which the American public can develop an appreciation for fish and wildlife.”

Commercial aircraft operations provide the public with safe access to unique hunting, fishing, wildlife observation, wildlife photography, and environmental education opportunities found few places in the world. These are activities the National Wildlife Refuge System Administration Act of 1966 (as amended by the Refuge Improvement Act of 1997) identifies as priority public uses. Commercial aircraft operations provide a valuable benefit to a segment of the public that does not have other means of access to the extremely remote environment of the Refuge, and support other uses found compatible in separate compatibility determinations.

Special use permits authorizing this activity will be appropriately conditioned to protect Refuge resources and visitor experiences, and the activity will be monitored to ensure that an appropriate level of use is maintained. After fully considering the impacts of this activity, as described previously in the “Anticipated Impact of the Use” section of this document, I find that this use will not materially interfere with or detract from the fulfillment of the Refuge System mission or the purposes of the Refuge.

Supporting Documents:

Arctic National Wildlife Refuge. 2010. Polar bear interaction guidelines. U.S. Fish and Wildlife Service, Fairbanks, Alaska. Unpublished. 3pp.

Interagency Grizzly Bear Committee. IBG Certified bear resistant products webpage. http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf, Accessed 11 Feb 2011.

U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.

U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.

U.S. Fish and Wildlife Service. 2008. Region 7: Bear awareness and firearms safety training policy, Appendix F. U.S. Fish and Wildlife Service. Anchorage, Alaska. Unpublished. 36 pp.

U.S. Fish and Wildlife Service. 2010. Arctic National Wildlife Refuge Public Use Summary. U.S. Fish and Wildlife Service. Fairbanks, Alaska. Unpublished. 45 pp.

DRAFT COMPATIBILITY DETERMINATION

Use: Commercial Big-game Hunting Guide Services

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall's sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This is a re-evaluation of the compatibility of use of Federal lands in the Refuge for guided hunting of big-game. This use is an existing activity that supports wildlife-dependent priority public uses. Commercial big-game hunting guide activities would occur during State-regulated hunting seasons. This compatibility determination addresses the full spectrum of uses associated with the overall activity of commercially guided hunting of big game, including all means of access, lodging and facilities, and other elements identified in the guides' operational plans. Authorized modes of access for all areas in the Refuge include fixed-wing aircraft, motorboats, snowmobiles, non-motorized boats, dogsled, foot, snowshoe, and cross-country ski. Lodging and facilities include tents and other temporary structures, and caches. The compatibility of non-guided general hunting on the Refuge is evaluated in a separate compatibility determination.

The State of Alaska is primarily responsible for managing fish and resident wildlife through setting seasons, bag limits, methods and means of harvest, and licensing of commercial guiding operators. The State of Alaska divides the State into game management units (GMUs), and big-game hunting guides are authorized to provide services in a particular GMU. The following GMUs fall within the boundaries of the Refuge: 25A, 25B, 25D, 26B, and 26C. The Refuge manages sixteen commercial big-game guiding areas on the Refuge through an exclusive special use permit process. Fifteen areas are currently awarded to 12 guides. One guide area is not currently offered. Guides and their clients are required to follow current State and Federal hunting regulations, including the requirements for applicable licenses and permits. Clients of big-game hunting guides seek black and grizzly bears, caribou, Dall's sheep, moose, wolves, and wolverines. Many of the hunters on Arctic Refuge hunt various species during the same hunt. It is common for a hunter to have sheep, caribou, and grizzly bear tags for a hunt north of the Brooks Range, or moose, caribou, and grizzly bear tags for a south-side hunt.

Arctic Refuge visitation has generally remained steady since the late 1980s, averaging around 1,000 visitors per year, yet at the same time, there has been a steady increase in the number of commercial permits issued. Across activity types, more than half of the commercially-supported visitation is guided. On average, where locations are known, about 77 percent of overall commercially-supported visitation occurs north of the Brooks Range, while about 23 percent occurs on the south side. Commercially guided or transported recreational visitors spend, on average, about nine days in the Refuge, in groups that average around five individuals. On average, it appears that hunters make up 28 percent, and other recreational visitors make 72 percent, of the total number of commercially-supported visitors. Guided hunters made up about 25 percent of the total number of commercially-supported general

hunters, while non-guided hunters using commercial air operators made up about 75 percent (Service 2010). Approximately 80 hunters a year utilize big-game hunting guide services (C. Villa, Service, unpublished data).

Arctic Refuge Public Use Summary (Service 2010) identifies current issues important to commercial big-game guiding services:

1. *Perceived Crowding and Hunting Conflicts*- Simultaneous visits by hunting groups and other recreation groups in some high-use areas due to weather or high demand have lead to a reported erosion of visitor experiences and user conflicts. Additionally, there are growing tensions between hunting guides and transporters, particularly in the northwest portions of the Refuge.
2. *Physical Impacts* – Physical impacts such as human waste accumulations and localized vegetation damage have been reported.

Availability of Resources: Permits are issued competitively for five years, with provision for renewal for an additional five-year term. The competitive process requires a substantial level of time and effort for the applicants and for Refuge and agency staff. Adequate Refuge personnel and base operational funds are available to manage guided big-game hunting activities at existing and projected levels.

Refuge staff participation includes the following. During the initial competitive process, Refuge employees review and rank applications; this process can take up to one week. The scores and applications are forwarded to the Refuge manager, who spends approximately one month writing and reviewing the prospectus, conducting guide interviews and making a selection, writing decision documents, and assisting with appeals that may result in litigation. Appropriate staff assist the Refuge manager throughout the decision process.

After initial selection, Refuge employees may spend about 10 days per year on oversight, permit compliance, and other guiding issues. Staff may spend one week issuing or renewing permits, administering use-day fee collections, monitoring permit compliance, and conducting related activities. Law enforcement officers spend an average of four weeks per year patrolling during the hunting season to monitor permit and hunting regulation compliance. In summary, staff time primarily involves reviewing applications, researching and writing decisions, responding to appeals, issuing and renewing special use permits every five years, ensuring licenses and certificates are current, collecting client use-day fees, and reporting data on an annual basis. An administrative fee is assessed when each permit is issued. In addition, client use-day fees are assessed for each day a guide has a client on the Refuge. Fees collected are returned to the Refuge to administer the program.

The Refuge's administrative oversight of the activity and comprehensive State and Federal regulations continually evolve to respond to management needs. Compliance with regulations and permit conditions will be routinely checked by Refuge staff. Refuge law enforcement personnel will also help minimize direct impacts from commercial air transportation services by enforcing compliance with special use conditions.

Anticipated Impacts of Use(s): Criteria in the competitive scoring and selection process used to select big-game guide permittees attempt to address minimizing impacts to Refuge

resources and to other visitors. These criteria include impacts on wildlife resources; other Refuge resources such as water quality, soil, and vegetation; and other Refuge users, especially subsistence users. The criteria address such factors as target species, number of clients, transportation modes, amount of aircraft use, fuel storage, garbage and human waste management, methods to protect wildlife and habitat, type and location of lodging, and location of access points. These selection criteria are used to rank or score applicants and provide a strong incentive to maintain a low-impact guide service. Permit conditions and stipulations noted in the following sections also contribute to minimizing potential impacts.

Commercial big-game hunting is also regulated by the State, and new draft regulations (AS 08.54 and 12 AAC 75) are under review by the Big Game Commercial Services Board. Commercial big-game guiding operations may, in some cases, result in some competition or interference with subsistence users and/or other non-guided general hunters for the limited number of game animals in river corridors. Refuge staff members are aware of these potential conflicts and monitor use levels each hunting season. Should allocation conflicts arise, the U.S. Fish and Wildlife Service (Service) will work to address them through the Federal Subsistence Board and the Alaska Board of Game and may develop further stipulations to address these concerns. These boards establish regulations aimed at managing populations of animals at sustainable levels and to avoid conflicts between user groups.

Perceived crowding in high-use drainages at peak times of the year is an emerging issue, as well as physical impacts such as waste accumulation and localized vegetation damage. If the Refuge manager determines there are threats to resources or substantive user conflicts due to repeated landings, the permit may be modified to restrict the permit holder. The Refuge manager may also require removal of human waste at landing sites that are heavily used in the guide area. However, as these are emerging issues, further monitoring will need to be conducted. Future stipulations may be developed to address these concerns.

Other impacts associated with this activity could be minimal and transitory to minor, and long-term. Disturbance to vegetation is site specific, minor, and long-term and would likely be restricted to campsites that receive repetitive use and to aircraft landings on non-durable surfaces. To minimize impacts from aircraft landings, we limit where commercial operators can land. Access to the Refuge during summer months would be by landing aircraft primarily on gravel bars. Winter access would be by aircraft fitted with skis. Landings on vegetated lowland tundra and disturbance to vegetation outside established landing areas would be limited under the stipulations of the special use permit. If damage to non-durable surface has been found, it may be necessary to further limit aircraft landings at those sites to reduce impacts to Refuge resources. Future stipulations may be developed to address these concerns. The introduction of invasive species could affect Refuge resources, although it is not known to have occurred by this activity in the Refuge to date. Staff will continue to monitor these areas for such occurrences. Temporary displacement and/or disturbance to wildlife can occur in response to low-level overflights and during takeoffs and approaches to landings, but impacts would likely be short-term and minimal.

Compliance with regulations and permit conditions will be routinely checked by officers. Refuge officers and State wildlife protection officers would routinely patrol the Refuge during hunting seasons.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: A special use permit with the following stipulations is required for commercial big-game guiding services. These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

1. Failure to abide by any part of this special use permit; violation of any refuge related provision in Titles 43 (Part 36) or 50 (Subchapters B and C) Code of Federal Regulations; violation of the Marine Mammal Protection Act of 1972; violation of the Endangered Species Act of 1973; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for immediate revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., assistants). Appeals of decisions relative to permits are handled in accordance with 50 Code of Federal Regulations 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of this permit.
3. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
4. The permittee must notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of annual activities allowed by this permit.
5. The permittee is responsible for accurate record keeping and must provide the refuge manager with a comprehensive summary report of the number of clients, and number of client days per activity type by December 31 for all uses during that calendar year unless stated otherwise in the permit. A legible copy of the State's "Hunt Record" for each client will be required in addition to the summary report.
6. The permittee and permittee's clients do not have the exclusive use of the site(s) or lands covered by this permit, except for the authorized camp facilities (if applicable).
7. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near

subsistence hunters, and damage to cabins, trails, traditional campsites, or caches used by subsistence users.

8. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C. 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
9. Construction of cabins, platforms, or other permanent structures is prohibited.
10. Use of off road vehicles is prohibited in designated Wilderness areas. Off-road vehicle use in non-Wilderness areas is limited to events specifically authorized in writing and in advance of--and in direct support of--the permitted activity. The use of snowmobiles, dog teams, and other means of surface transportation may only be used when adequate snow cover is present and in such a manner as to prevent waste or damage to the Refuge. The phrase "adequate snow cover" means snow is of a depth to protect the underlying vegetation and soil.
11. Snowmobiles, dog teams, watercraft, and other means of transportation shall be operated in such a manner as to prevent the herding, harassment, hazing, or driving of wildlife for viewing or other purposes.
12. Any human-wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the refuge manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the refuge manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident Report form (Service 2008). Animals taken in defense of life or property must be reported to the refuge manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.
13. Use of fuel stoves is encouraged over use of wood for cooking and heating. Only dead and down wood may be used for fires and other purposes. Live and standing dead wood must not be altered or used in a way that causes damage to them.
14. Motorboat operators must possess a U.S. Coast Guard (USCG) license for all passenger carrying operations, if required by USCG regulations.
15. Failure to report the actual number of client use days per type of authorized activity by December 31 of each calendar year and annually pay the Service's established fees (client use day and reserved land site) within 30 days after receiving a bill for collection will be grounds for revocation of this permit.
16. Prior to beginning any activities allowed by this permit, the permittee must provide the refuge manager with: (1) proof of comprehensive general liability insurance (\$300,000 each occurrence, \$500,000 aggregate) covering all aspects of operations throughout the annual use period, (2) aircraft and other vehicle types to be used, with identification information, if different from the original permit or previous year; (3)

- changes in names of assistant guides and other employees; and (4) any other changes in information provided in the original permit/proposed operations plan.
17. The permittee may not sublet any part of the authorized use area and is prohibited from subcontracting clients with any other guide. The permittee must also be personally present with each client in the refuge designated use area at least once during each contracted hunt.
 18. This permit does not authorized use of Native selected lands within the permit area unless approved by the refuge manager. The applicant must provide the refuge manager with written views from the affected Native organization(s) before authorization to use the selected lands can be considered. However, if the affected Native organization(s) provide no response to the permittee's request for views, the permittee may provide the refuge manager with a copy of the letter that he/she sent requesting the views of Native organization(s). If any of the selected lands are conveyed during the term of this permit, the permittee will no longer be authorized to use those lands.
 19. This permit authorizes use on State selected lands. If any of these lands are conveyed during the term of this permit, the permittee will no longer be authorized to use those lands until and unless permission is obtained from the Alaska Department of Natural Resources.
 20. Any action by a permittee or the permittee's employees which unduly interferes with or harasses other Refuge visitors or impedes access to any site is strictly prohibited. Examples of prohibited acts include, but are not limited to, low flights over camps or persons at less than 500 feet (unless landing) and parking aircraft or placing other objects (rocks, tents, etc.) on any landable area so as to restrict use by other aircraft or persons.
 21. Fuel storage sites must be approved by the refuge manager. Preparations to prevent and respond to a fuel spill must be fully adequate at all sites for the amount of fuel stored on site.
 22. Equipment caches may be located in approved areas. Contact the refuge manager for approval. The cache will be clearly marked with the Permittee's name, will be designed to blend in with the surrounding environment, and will be bear-proof.
 23. All temporary accommodations will be constructed of materials that blend with the immediate surroundings. Campsites, shelters, and equipment will be used and maintained in a manner consistent with the protection of area resources, including wilderness character.
 24. Base camp locations must be approved by the refuge manager. Base camps will be located on durable surfaces, or relocated at intervals adequate to prevent site impacts.
 25. Subject to available suppression resources, all permitted cabins, structures, and/or related facilities will be protected from wildfire to the extent possible. Human safety will receive the highest priority consideration by land managers and fire suppression personnel.
 26. The permittee's operation plan, as amended and accepted by the U.S. Fish and Wildlife Service, is hereby incorporated in its entirety as a special condition. All

deviations from the operations plan must receive prior written approval by the refuge manager or his designee.

27. Frequent landing sites are limited to non-vegetated surfaces such as gravel bars, barrier islands, ridge tops and other areas with no apparent plant cover when viewed from the air during a normal landing site inspection pass. Aircraft will avoid landing on fragile/wet tundra soil sites. Water landings are allowed and ski operations may continue where adequate snow cover exists. If the refuge manager determines there is a threat to resources or substantive user conflicts due to repeated landings, then the permit may be modified to restrict the permit holder to designated sites or types of sites.
28. All aircraft being used in a commercial guiding operation must have 12" identification numbers in contrasting colors which are readily visible.
29. The operation of aircraft at altitudes and in flight paths resulting in the herding, harassment, hazing, or driving of wildlife is prohibited. It is recommended that all aircraft, except for take-off and landing, maintain a minimum altitude of 2,000 feet above ground level (AGL).
30. The construction or clearing of landing strips or pads is prohibited. Incidental hand removal of rocks and other minor obstructions may be allowed.
31. The permittee must maintain their use areas in a neat and sanitary condition. Latrines must be located at least 200 feet from springs, lakes, and streams. All property (except cabins and/or tent frames) of the permittee must be removed from refuge lands upon completion of permitted activities.
32. Provisions for human waste management and disposal must be approved by the refuge manager.
33. All garbage and trash will be secured in a manner that minimizes attraction to wildlife and must be removed from the field before vacating the site for the season.
34. The preeminent value of the Arctic Refuge lies in its unsurpassed wilderness condition. The permittee must ensure that all employees and clients seek to minimize the effect of their activities on the wilderness character of the land, wildlife, and the unique experience available there.

For special use permits issued in designated wilderness, the following conditions also apply:

- Boat motors and/or generators are not authorized for use within designated Wilderness.

All permitted activities that occur within 25 miles of the Beaufort Sea coastline will have the following additional condition:

- The permittee must read the Polar Bear Interaction Guidelines (Guidelines) (Arctic Refuge 2010) to these permit Special Conditions. The Guidelines must also be distributed to all employees and clients of the permittee before engaging in any activities on the Refuge. In addition, the following conditions shall be met:
 - Protection of den sites and minimizing disturbance to sows with small cubs is of critical importance. Guides operating under this permit must become

knowledgeable of the signs and behaviors indicating the presence of a den and avoid those areas. No person shall approach, or remain, within 1 mile of a polar bear den, or of a sow with small cubs. If at any time the permittee becomes aware of signs indicating their close proximity to a polar bear den, or encounters a sow with small cubs, all members of the guided party must immediately retreat to a distance of at least one mile. If, at any time, the location of a den becomes known to the permittee, no approach shall be made closer than one mile. When operating within 25 miles of the Beaufort Sea coastline, the permittee will store attractants (human food, dog food, garbage, etc.) in “bear-resistant” containers to minimize attracting polar bears and avoid conditioning bears to human food. Containers must be approved as “bear-resistant.” Information about certified “bear resistant” containers can be found at

http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf

- Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.
- Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.

Justification: The congressional committee report on the National Wildlife Refuge System Improvement Act of 1997 states: “It establishes as the policy of the United States that wildlife-dependent recreation, when it is compatible, is a legitimate and appropriate public use of the Refuge System, through which the American public can develop an appreciation for fish and wildlife.”

Big-game guides are competitively selected to operate on Refuge lands through a formal process, first established by regional policy in 1992, and later codified (50 CFR 36.41). Competitive selection is intended to limit or manage commercial guiding to a level compatible with Refuge purposes and to ensure that quality guiding services are available to the public. Big-game guides are required to comply with all applicable State and Federal laws and regulations, and obtain required State and Federal permits/authorizations related to their guiding activities.

In Arctic Refuge, the objective of allowing commercial big-game guiding is to make available to the public a variety of quality recreational hunts on areas of the Refuge where such activities are compatible with the mission of the Refuge System and the Refuge's purposes, and consistent with management objectives. Hunting is an important wildlife management tool that we recognize as a healthy, traditional outdoor pastime, deeply rooted in the American heritage. Hunting can instill a unique understanding and appreciation of wildlife, their behavior, and their habitat needs (605 FW 2.3). Management direction requires that general hunting reflect well on the Refuge and on the tradition of hunting. It must promote positive hunting values and hunter ethics such as fair chase, and provide participants with reasonable harvest opportunities, less crowding, less competition, fewer conflicts between hunters, relatively undisturbed wildlife, greater hunter safety, less than average crippling loss, and less interference from or dependence on mechanized aspects of the sport. Commercial guiding activities authorized on Refuge lands should contribute to the management direction.

To protect sensitive resources and the pristine wilderness values of the area and to maintain quality wilderness experiences for other users, strong consideration for selection of guides will be given to proposed operations that incorporate Leave No Trace practices in base and spike camp operations, and minimize use and impacts of aircraft or other motorized access. In addition, the guiding activities authorized will be subject to permit conditions needed to protect the natural resources, subsistence user access, and wilderness values of the area.

After fully considering the impacts of this activity, as described previously in the "Anticipated Impacts" section of this document, it is my determination that commercially guided big-game hunting activities on the Refuge do not materially interfere with or detract from the purposes of the Refuge or the mission of the Refuge System.

Supporting Documents:

- Arctic National Wildlife Refuge. 2010. Polar bear interaction guidelines. U.S. Fish and Wildlife Service, Fairbanks, Alaska. Unpublished. 3pp.
- U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.
- U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.
- U.S. Fish and Wildlife Service. 2008. Region 7: Bear awareness and firearms safety training policy, Appendix F. U.S. Fish and Wildlife Service. Anchorage, Alaska. Unpublished. 36 pp.
- U.S. Fish and Wildlife Service. 2010. Arctic National Wildlife Refuge Public Use Summary. U.S. Fish and Wildlife Service. Fairbanks, Alaska. Unpublished. 45 pp.

Refuge Determination:

Refuge Manager/

Project Leader Approval _____
(Signature) Date

Concurrence:

Regional Chief

National Wildlife

Refuge System _____
(Signature) Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision

- _____ Categorical Exclusion without Environmental Action Memorandum
- _____ Categorical Exclusion and Environmental Action Memorandum
- _____ Environmental Assessment and Finding of No Significant Impact
- X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Commercial Recreational Fishing Guide Services

Primary use: Fishing (guiding and outfitting)

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. *to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. *to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. *to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. *to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of

wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This is a re-evaluation of the compatibility of commercial recreational fishing guide services as a use of Federal lands in Arctic Refuge. This activity was originally found to be compatible in 1988 during the development of the original Arctic Refuge Comprehensive Conservation Plan and again determined to be compatible in 1994, subject to reasonable regulation and special conditions provided with a special use permit.

The State of Alaska is primarily responsible for the managing fish and resident wildlife through setting seasons, bag limits, methods and means of harvest, and licensing of commercial guiding operators. Commercial recreational fishing guide services provided in the Refuge are allowed by Refuge special use permit only. “Run of the river” fishing operations are required by Refuge management in place of operations that provide multi-night base camping on a single spawning ground. Means of access include fixed-wing airplanes, motorboats, non-motorized boats, hiking, and snowmobiling. Guided recreational fishing occurs spring through winter and is managed under State of Alaska fishing regulations (5AAC). The major rivers on the Refuge have fair fishing opportunities, based on reasonable accessibility by airplane or boat, and sustainable populations of anadromous and/or resident fish. Although all these drainages provide opportunities for multi-day use and overnight primitive camping, distance and cost of traveling to these areas for day-use recreational fishing is prohibitive for most visitors. Species of primary interest are arctic char, lake trout, and grayling.

Commercially guided recreational fishing generally occurs for lake trout or Arctic char, either in conjunction with other use or, rarely, as the primary use. The information available indicates that catch-and-release fishing is common. More often, recreational fishing has occurred as an incidental, occasional, or subsidiary activity to other guided activities such as floating, hiking, or big-game hunting, for example, and has not been considered as a guided activity in that context. Only two commercially guided recreational fishing services special use permits have been issued within the last 10 years. Neither of these permits reported any activity. It is likely the reason for low use is that much better, less expensive fishing is available elsewhere in the State.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage commercially guided recreational fishing at current existing and projected

levels. Administrative staff time primarily involves issuing permits, ensuring the licenses and certifications are current, collecting client use-day fees, and recording activity data. Field work associated with administering the program primarily involves monitoring permittees' compliance with the terms of the permits and resource law enforcement patrols. Estimated staff time to annually administer and monitor these permits is less than two weeks. An administrative fee is assessed when each permit is issued. In addition, a client use-day fee is assessed for each day a guide has a client on the Refuge. In addition, fees are returned to the Refuge to manage the program.

Anticipated Impacts of the Use(s): The Federal Subsistence Board and State Board of Fisheries regularly adopt regulations in response to fish population levels and to address issues of fishery allocation. Providing an opportunity for continued subsistence uses of fishery resources by local residents receives the highest priority from the Federal Subsistence Board. Recent, 1998 to present, Chinook salmon returns have been characterized as poor, and managers (State and Federal) may restrict recreational use of this resource. Chum salmon experienced a worrisome decline in the late 1990s; however, recent run strengths indicate that a recreational fishery on chum salmon currently is sustainable. Guided recreational harvests are monitored to protect fish, as well as subsistence resources for people living near the Refuge.

At current levels, guided recreational fishing harvests require little to no monitoring, and there are no anticipated deleterious effects on fish habitat. Should intensity of use increase, Refuge staff would increase monitoring efforts. If necessary, Refuge staff would review regulations and propose changes to protect fishery resources and subsistence fishing opportunities for people living near the Refuge. We will continue to work with the Fairbanks Fish and Wildlife Field Office to implement inventories and conduct studies aimed at better understanding fish populations on the Refuge.

Additional potential impacts or threats are associated with airplane or motorboat access. Landings on vegetated lowland tundra and disturbance to vegetation would be limited under the terms of the special use permit. The introduction of invasive plant species carried on boats or aircraft could affect Refuge resources, although introductions are not known to have occurred by this mode of transportation on the Refuge to date and will continue to be monitored by Refuge staff. Temporary displacement and/or disturbance to wildlife can occur in response to low-level overflights and during takeoffs and approaches to landings, but impacts would likely be short-term and minimal. Compliance with regulations and permit conditions will be routinely checked by Refuge officers and State wildlife officers.

Public Review and Comment: Public comment is being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Determination:

Proposed activity is not compatible

Proposed activity is compatible

Stipulations Necessary to Ensure Compatibility: A special use permit with the following stipulations is required for commercial recreational fishing guide services. These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

1. Failure to abide by any part of this special use permit; violation of any refuge related provision in Titles 43 (Part 36) or 50 (Subchapters B and C) Code of Federal Regulations; violation of the Marine Mammal Protection Act of 1972; violation of the Endangered Species Act of 1973; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for immediate revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., assistants). Appeals of decisions relative to permits are handled in accordance with 50 Code of Federal Regulations 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of this permit.
3. The permittee must maintain, throughout the use period specified on the permit, Comprehensive General Liability Insurance (\$300,000 each occurrence, \$500,000 annual aggregate) covering all ground or water based operations and (unless air transportation is already covered) Aviation Passenger Liability (\$150,000/seat plus \$100,000 property) covering all aircraft operations involving clients.
4. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
5. The permittee must notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of annual activities allowed by this permit.
6. Prior to beginning any activities allowed by this permit, the permittee must provide the refuge manager with: (1) the name(s) and method of contact for the lead field guide(s); (2) aircraft and other vehicle types to be used and identification information for these vehicles; (3) names of assistant guides and helpers; and (4) any changes in information provided in the original permit application.
7. The permittee must provide the refuge manager with a Client Use Report of the trip dates, locations, number of clients each trip, number of clients per trip, and number and species of all animals taken (if applicable). The permittee may be required to provide names, addresses, and phone numbers of clients.
8. Client Use Reports must be received by October 15, or within 30 days of permit expiration, whichever date is earliest. For permits valid beyond October 31, partial reports including all activity through October 15 must be received by October 31, and reports for activity between October 16 and the date of the permit's expiration must be received within 30 days of the permit's expiration. Failure to report the actual number of client use days per type of activity on or before the due date, and pay the Service's

client use day fees within 30 days after receiving a bill for collection, will be a violation of this permit.

9. This permit authorizes use only on Arctic National Wildlife Refuge lands. Use of land selected by or conveyed to the State of Alaska or North Slope Borough; or a Native corporation or individual is not authorized by this permit.
10. The permittee and permittee's clients do not have the exclusive use of the site(s) or lands covered by this permit, except for the authorized camp facilities (if applicable).
11. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near subsistence hunters, and damage to cabins, trails, traditional campsites, or caches used by subsistence users.
12. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
13. Construction of cabins, platforms, or other permanent structures is prohibited.
14. Use of off road vehicles is prohibited in designated Wilderness areas. Off-road vehicle use in non-Wilderness areas is limited to events specifically authorized in writing and in advance of--and in direct support of--the permitted activity. The use of snowmobiles, dog teams, and other means of surface transportation may only be used when adequate snow cover is present and in such a manner as to prevent waste or damage to the Refuge. The phrase "adequate snow cover" means snow is of a depth to protect the underlying vegetation and soil.
15. Snowmobiles, dog teams, watercraft, and other means of transportation shall be operated in such a manner as to prevent the herding, harassment, hazing, or driving of wildlife for viewing or other purposes.
16. Any human-wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the Refuge Manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the Refuge Manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident Report form (Service 2008). Animals taken in defense of life or property must be reported to the Refuge Manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.
17. Use of fuel stoves is encouraged over use of wood for cooking and heating. Only dead and down wood may be used for fires and other purposes. Live and standing dead wood must not be altered or used in a way that causes damage to them.

18. In general and where possible, camps must be located on durable surfaces (snow, sand or gravel). Camps located on vegetation must be relocated at intervals adequate to prevent site impacts. Sites at popular aircraft access points that are already heavily impacted can continue to be used. Along high use rivers and lakes, camps must not be located on vegetated sites that show human caused scuffing or matting of vegetation.
19. Total group size including guides is limited to seven people for land-based trips; and ten people for water-based trips. Permit holders can have one group on a river or water body at a time. Concurrent possession of other Refuge permits does not increase this number.
20. Campsites may be occupied for a maximum of two nights after which the camp must be moved at least one mile and not reoccupied by the same guide service within the following 14 days. An exception is allowed in situations where inclement weather might make river travel unsafe.
21. All garbage, litter, and debris must be removed from the refuge. Food, garbage, and other materials must be stored to minimize attraction to bears and other wildlife. All evidence of your camp must be obliterated prior to your departure from the site. Equipment and other property must be removed from the refuge upon completion of the permitted activities.
22. Human waste must not be left less than 200 feet from springs, lakes, and streams. Bury waste under soil (or under snow at the ground level during periods when the ground is frozen). Paper toilet tissue, if used, must be packed out or burned completely to ash. Moist towelettes or sanitary products must be removed as trash. In high use areas, especially the Kongakut and Hulahula river corridors and extended base-camps, we encourage packing-out of human waste.
23. Prior to entry onto the Refuge the permit holder must provide to the Refuge Manager copies of State Fishing Guide licenses and U.S. Coast Guard licenses as appropriate for operation of motorized watercraft (if one will be used) of all guides working under this permit.
24. The permittee agrees to minimize accidental fish mortality through effective catch and release fishing practices and avoiding wading through spawning fish. Please utilize killed fish.
25. Records of fish caught and released and mortalities must be tallied by species and drainage and reported to Refuge staff with the annual report.
26. The preeminent value of the Arctic Refuge lies in its unsurpassed wilderness condition. The permittee must ensure that all employees and clients seek to minimize the effect of their activities on the wilderness character of the land, wildlife, and the unique experience available there.

For special use permits issued in designated wilderness, the following condition also applies:

- Boat motors and/or generators are not authorized for use within designated Wilderness.

All permitted activities that occur within 25 miles of the Beaufort Sea coastline will have the following additional condition:

- The permittee must read the Polar Bear Interaction Guidelines (Guidelines) (Arctic Refuge 2010) to these permit Special Conditions. The Guidelines must also be distributed to all employees and clients of the permittee before engaging in any activities on the Refuge. In addition, the following conditions shall be met:
 - Protection of den sites and minimizing disturbance to sows with small cubs is of critical importance. Guides operating under this permit must become knowledgeable of the signs and behaviors indicating the presence of a den and avoid those areas. No person shall approach, or remain, within 1 mile of a polar bear den, or of a sow with small cubs. If at any time the permittee becomes aware of signs indicating their close proximity to a polar bear den, or encounters a sow with small cubs, all members of the guided party must immediately retreat to a distance of at least one mile. If, at any time, the location of a den becomes known to the permittee, no approach shall be made closer than one mile. When operating within 25 miles of the Beaufort Sea coastline, the permittee will store attractants (human food, dog food, garbage, etc.) in "bear-resistant" containers to minimize attracting polar bears and avoid conditioning bears to human food. Containers must be approved as "bear-resistant." Information about certified "bear resistant" containers can be found at http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf
 - Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.
 - Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.

Justification: Commercial recreational fishing guide services support traditional activity that Congress intended to preserve with enactment of ANILCA, which established a set of purposes for the Refuge. Guides support not only angling, but also other activities, including wildlife observation and photography, all of which the National Wildlife Refuge System

Administration Act of 1966 (as amended by the Refuge Improvement Act of 1997) identifies as priority public uses. The congressional committee report on the National Wildlife Refuge System Improvement Act of 1997 states: “It establishes as the policy of the United States that wildlife-dependent recreation, when it is compatible, is a legitimate and appropriate public use of the Refuge System, through which the American public can develop an appreciation for fish and wildlife.”

Guided recreational fishing operations on the Refuge would provide the public with quality, safe, and unique recreational fishing opportunities found few places in the world. These visitor services are a valuable benefit to a segment of the public that is not physically able to participate, not comfortable with participating, or choose not to participate in non-guided fishing trips in the Refuge.

Recreational fishing has been found compatible with Refuge purposes and is one of the priority public uses of national wildlife refuges. Guides help facilitate public participation in this activity. After fully considering the impacts of this activity, as described previously in the “Anticipated Impacts” section of this document, it is my determination that commercial recreational fishing guide service activities in the Refuge do not materially interfere with or detract from the purposes of the Refuge or the mission of the Refuge System.

Supporting Documents:

- Arctic National Wildlife Refuge. 2010. Polar bear interaction guidelines. U.S. Fish and Wildlife Service, Fairbanks, Alaska. Unpublished. 3pp.
- Interagency Grizzly Bear Committee. IBG Certified bear resistant products webpage. http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf, Accessed 11 Feb 2011.
- U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.
- U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.
- U.S. Fish and Wildlife Service. 2008. Region 7: Bear awareness and firearms safety training policy, Appendix F. U.S. Fish and Wildlife Service. Anchorage, Alaska. Unpublished. 36 pp.
- U.S. Fish and Wildlife Service. 2010. Arctic National Wildlife Refuge Public Use Summary. U.S. Fish and Wildlife Service. Fairbanks, Alaska. Unpublished. 45 pp.

Refuge Determination:

Refuge Manager/

Project Leader Approval

_____ _____
(Signature) Date

Concurrence:

Regional Chief

National Wildlife

Refuge System

_____ _____
(Signature) Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

 X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Commercial Recreational Guide Services

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. *to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. *to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. *to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. *to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Uses: This description of use includes a re-evaluation of the compatibility of use of Federal lands in the Refuge for all types of guided recreation (except for hunting and fishing). Guided commercial recreation activities encompass a wide array of outdoor activities but mainly include river floating, kayaking, camping, backpacking, base-camping, polar bear viewing, dog mushing, wildlife viewing, photography, etc. Means of access is primarily by commercially operated aircraft but could also include dog teams, motorized or non-motorized boat, foot, or skiing. The original compatibility determination for guided recreation was made in 1994, subject to reasonable regulation and special conditions provided with a special use permit.

Arctic Refuge visitation has generally remained steady since the late 1980s, averaging around 1,000 visitors per year, yet there has been a steady increase in the number of commercial permits issued. Commercially guided recreation tours are an activity that supports wildlife-dependent priority public uses. Across activity types, more than half of the commercially-supported visitation is guided. On average, where locations are known, about 77 percent of overall commercially-supported visitation occurs north of the Brooks Range, while about 23 percent occurs on the south side. Nearly one-quarter (21 percent) of the commercially-supported visitors to the Refuge visit the Kongakut River drainage on the north side of the Brooks Range. Commercially guided or transported recreational visitors spend, on average, about nine days in the Refuge, in groups that average around five individuals. On average, it appears that hunters make up 28 percent, and recreational visitors make 72 percent, of the total number of commercially-supported visitors (Service 2008).

According to the recent Arctic Refuge Visitor Study Summary (Christensen Research 2009), the greatest positive influence on visits came from experiencing the components of “wilderness” (92 percent), “A Sense of Vastness” (92 percent), “Remoteness and Isolation” (89 percent), “A Sense of Adventure” (84 percent), and “Natural Conditions” (84 percent). Additionally, the Refuge purposes most frequently rated as “Very Important” were “Wildlife” (97 percent), “Wilderness” (96 percent), “A bequest to future generations” (89 percent), “Remoteness and isolation” (89 percent), and “A place where natural processes continue” (86 percent). According to the study, respondents encountered an average of two other groups on their trip, saw or heard four airplanes, and saw an average of one site with evidence of previous visitor use.

Arctic Refuge Public Use Summary (2010a) identifies current trends important to commercial recreational guide services:

1. *Perceived Crowding and User Conflicts* - Simultaneous visits by both hunting and recreation groups in some high-use areas due to weather, or high demand, have led to a reported erosion of visitor experiences and user conflicts;
2. *Physical impacts*: Human waste accumulation and localized vegetation damage has been reported.
3. *Dalton Highway-based Visitation* - There is high probability that the western boundary of the Refuge will continue to become more popular with visitors as awareness of relatively economical Dalton Highway-based access continues to rise. Arctic Refuge managers now consider the Dalton Highway the Refuge's "Front country."
4. *Polar Bear Viewing* - The opportunity to view polar bears outside of captivity offers a valuable tool for delivering species and land conservation messages, if viewing is practiced in a way that promotes a conservation ethic. The Arctic Refuge is responsible for ensuring that commercial uses of its lands and waters, including the emerging opportunity to view polar bears with a commercial guide, are conducted in a way that complies with both the Marine Mammal Protection Act and the Endangered Species Act. The Refuge is committed to a wide array of partners to manage its commercial guided polar bear viewing program for optimal support of polar bear conservation;
5. *Packrafting* - The emergence of commercially-manufactured, lightweight, backpackable inflatable rafts is making rivers and streams that were once un-floatable due to low water or lack of access more available to a range of users. This could potentially change the patterns of use on Arctic Refuge.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage commercial guided recreational activities at existing and projected levels. Administrative staff time primarily involves issuing permits, ensuring that licenses and certifications are current, collecting client use-day fees, and recording activity data. Field work associated with administering the program primarily involves monitoring permittees' compliance with the terms of the permits. Estimated staff time to annually administer and monitor these permits is one person full-time, all year long.

Anticipated Impacts of Uses: We anticipate minimal to minor, site-specific impacts to fish and wildlife resources, other Refuge resources, or other Refuge users. Disturbance to wildlife or other Refuge users could occur if other groups or wildlife are encountered during a visit. Damage to vegetation should be limited by the stipulations of a permit. Permittees are required to camp on durable surfaces when they are available. Impacts from base-camping are minimized by requiring long-term camping on durable surfaces only or by requiring relocation of a base camp to avoid damage to vegetation. Additionally, the Refuge's administrative oversight of the activity and comprehensive State and Federal regulations continually evolve to respond to management needs. Compliance with regulations and permit conditions will be routinely checked by Refuge staff. Refuge law enforcement personnel will

also help minimize direct impacts from recreational guide services by enforcing compliance with special use conditions.

Perceived crowding in high-use drainages at peak times of the year is an emerging issue, as well as reports of physical impacts such as waste accumulation and localized vegetation damage in these high-use drainages. These are emerging issues that require further monitoring and assessment. Future stipulations may be developed to address these concerns.

Additional potential impacts or threats are associated with airplane or motorboat access. Disturbance to vegetation is site specific, minor, and long-term and would likely be restricted to site where aircraft landed repeatedly on non-durable surfaces. To minimize impacts from aircraft landings, we limit where commercial operators can land. Landing aircraft on non-durable surfaces could cause minor, site-specific, long-term effects to Refuge habitats and vegetation. To keep this from occurring, we limit where commercial operators can land. Access to the Refuge during summer months would be by landing aircraft primarily on gravel bars. Winter access would be by aircraft fitted with skis. Landings on vegetated lowland tundra and disturbance to vegetation outside established landing areas would be limited under the stipulations of the special use permit. If damage to non-durable surface has been found, it may be necessary to further limit aircraft landings at those sites to reduce impacts to Refuge resources. Additionally, the introduction of invasive species could affect Refuge resources, although it is not known to have occurred by aircraft landings or any of the commercial recreational activities in the Refuge to date. Staff will continue to monitor areas for such occurrences. Temporary displacement and/or disturbance to wildlife can occur in response to low-level overflights and during takeoffs and approaches to landings, but impacts would likely be short-term and minimal.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge’s Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: A special use permit with the following stipulations is required for commercial recreational guide services. These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

Commercial Recreational Guide Services Special Use Permit Conditions – General:

1. Failure to abide by any part of this special use permit; violation of any refuge related provision in Titles 43 (Part 36) or 50 (Subchapters B and C) Code of Federal Regulations; violation of the Marine Mammal Protection Act of 1972; violation of the Endangered Species Act of 1973; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for immediate revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., assistants). Appeals of decisions relative to permits are handled in accordance with 50 Code of Federal Regulations 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of this permit.
3. The permittee must maintain, throughout the use period specified on the permit, Comprehensive General Liability Insurance (\$300,000 each occurrence, \$500,000 annual aggregate) covering all ground or water based operations and (unless air transportation is already covered) Aviation Passenger Liability (\$150,000/seat plus \$100,000 property) covering all aircraft operations involving clients.
4. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
5. The permittee must notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of annual activities allowed by this permit.
6. Prior to beginning any activities allowed by this permit, the permittee must provide the refuge manager with: (1) the name(s) and method of contact for the lead field guide(s); (2) aircraft and other vehicle types to be used and identification information for these vehicles; (3) names of assistant guides and helpers; and (4) any changes in information provided in the original permit application.
7. The permittee must provide the refuge manager with a Client Use Report of the trip dates, locations, number of clients each trip, number of clients per trip, and number and species of all animals taken (if applicable). The permittee may be required to provide names, addresses, and phone numbers of clients.
8. Client Use Reports must be received by October 15, or within 30 days of permit expiration, whichever date is earliest. For permits valid beyond October 31, partial reports including all activity through October 15 must be received by October 31, and reports for activity between October 16 and the date of the permit's expiration must be received within 30 days of the permit's expiration. Failure to report the actual number of client use days per type of activity on or before the due date, and pay the Service's client use day fees within 30 days after receiving a bill for collection, will be a violation of this permit.
9. This permit authorizes use only on Arctic National Wildlife Refuge lands. Use of land selected by or conveyed to the State of Alaska or North Slope Borough; or a Native corporation or individual is not authorized by this permit.

10. The permittee and permittee's clients do not have the exclusive use of the site(s) or lands covered by this permit, except for the authorized camp facilities (if applicable).
11. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near subsistence hunters, and damage to cabins, trails, traditional campsites, or caches used by subsistence users.
12. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C. 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
13. Construction of cabins, platforms, or other permanent structures is prohibited.
14. Use of off road vehicles is prohibited in designated Wilderness areas. Off-road vehicle use in non-Wilderness areas is limited to events specifically authorized in writing and in advance of--and in direct support of--the permitted activity. The use of snowmobiles, dog teams, and other means of surface transportation may only be used when adequate snow cover is present and in such a manner as to prevent waste or damage to the Refuge. The phrase "adequate snow cover" means snow is of a depth to protect the underlying vegetation and soil.
15. Snowmobiles, dog teams, watercraft, and other means of transportation shall be operated in such a manner as to prevent the herding, harassment, hazing, or driving of wildlife for viewing or other purposes.
16. Any human-wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the refuge manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the refuge manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident Report form (Service 2008). Animals taken in defense of life or property must be reported to the refuge manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.
17. Use of fuel stoves is encouraged over use of wood for cooking and heating. Only dead and down wood may be used for fires and other purposes. Live and standing dead wood must not be altered or used in a way that causes damage to them.
18. In general and where possible, camps must be located on durable surfaces (snow, sand or gravel). Camps located on vegetation must be relocated at intervals adequate to prevent site impacts. Sites at popular aircraft access points that are already heavily impacted can continue to be used. Along high use rivers and lakes, camps must not be located on vegetated sites that show human caused scuffing or matting of vegetation.

19. Total group size including guides is limited to seven people for land-based trips; and ten people for water-based trips. Permit holders can have one group on a river or water body at a time. Concurrent possession of other Refuge permits does not increase this number.
20. All garbage, litter, and debris must be removed from the refuge. Food, garbage, and other materials must be stored to minimize attraction to bears and other wildlife. All evidence of your camp must be obliterated prior to your departure from the site. Equipment and other property must be removed from the refuge upon completion of the permitted activities.
21. Human waste must not be left less than 200 feet from springs, lakes, and streams. Bury waste under soil (or under snow at the ground level during periods when the ground is frozen). Paper toilet tissue, if used, must be packed out or burned completely to ash. Moist towelettes or sanitary products must be removed as trash. In high use areas, especially the Kongakut and Hulahula river corridors and extended base-camps, we encourage packing-out of human waste.
22. The preeminent value of the Arctic Refuge lies in its unsurpassed wilderness condition. The permittee must ensure that all employees and clients seek to minimize the effect of their activities on the wilderness character of the land, wildlife, and the unique experience available there.

Additional Conditions for Commercial Dog Mushing Permits:

Conditions 1-21 plus the following:

- Dog waste associated with overnight or extended camps should be scattered no less than 200 feet from springs, lakes, and streams.
- Dog food should be heated with a stove, not local firewood or vegetation, whenever possible.
- Snowmobiles may not be used for logistical support or to break or set trail for guided sled dog trips, nor may they be used for any purpose in association with the permitted commercial activity in designated wilderness.
- Sled dogs must be staked out on picket cables or similar gang lines, and not tied individually to trees.
- Straw or hay may not be transported into the refuge.

Additional Conditions for Commercial Polar Bear Viewing Permits:

Conditions 1-16 listed in general conditions plus the following:

- Operations under this permit are restricted to day use only. "Day use" is defined as that period between sunrise and sunset. No overnight camping or guiding operations are authorized under this permit. There will be no evidence of guiding activities upon your departure from any site. All garbage, litter, and debris must be removed from the refuge. Equipment and all personal property must be removed from the refuge upon completion of each day's permitted activities.
- For all guided polar bear viewing activities, the permittee must read the Polar Bear Viewing Guidelines (Service 2010b) to these permit Special Conditions. The Guidelines

must also be distributed to all employees and clients of the permittee before engaging in any activities on the Refuge. In addition, the following conditions shall be met:

- The permittee must ensure all guides and clients are familiar with the permittee's polar bear safety plan through a safety briefing, and are familiar with proper emergency procedures before embarking to view polar bears.
- Protection of den sites and minimizing disturbance to sows with small cubs is of critical importance. Guides operating under this permit must become knowledgeable of the signs and behaviors indicating the presence of a den and avoid those areas. No person shall approach, or remain, within 1 mile of a polar bear den, or of a sow with small cubs. If at any time the permittee becomes aware of signs indicating their close proximity to a polar bear den, or encounters a sow with small cubs, all members of the guided party must immediately retreat to a distance of at least one mile. If, at any time, the location of a den becomes known to the permittee, no approach shall be made closer than one mile.
- To ensure the safety of clients, and provide for a quality guided experience, guides operating under this permit must remain in close proximity of all clients, at all times, while in the field. Staging, dropping off, or otherwise abandoning or separating members from a guided party, for any reason, is prohibited. "Close proximity" is defined as that distance whereby communication between individuals may take place with a normally spoken voice.
- Permittees are expected to fully comply with the provisions of the Marine Mammal Protection Act. Permittees shall ensure all members of their party maintain appropriate distances from polar bears at all times to prevent disruptions in normal behaviors. Approaching or behaving around polar bears in a way that results in any act of pursuit, torment, or annoyance which has the potential to injure or disturb a polar bear by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering is a violation of the Marine Mammal Protection Act, is considered harassment, and represents grounds for immediate revocation of this special use permit.
- It is illegal to restrict movements of swimming bears. If viewing from a boat, do not block the path in which the bear is travelling. If the bear is passing, put the engine in neutral to allow the bear to pass. While operating the boat, do not approach, encircle, or pursue a swimming bear; do not trap a swimming bear between boats; do not separate a swimming mother from her cubs. If approached by a swimming bear, move the boat away to minimize interactions. If the bear persists, leave the area while avoiding abrupt movements or sounds, such as sudden use of the engine throttle.
- Total group size including guides is limited to seven people for land-based and ten people for water-based trips. Permit holders can have one group operating at a time. Concurrent possession of other Refuge permits does not increase this number.
- Permittees using watercraft must comply with all applicable US Coast Guard regulations, including, but not limited to vessel, operator, and safety equipment requirements.

- As the intent of the permit is to facilitate bear viewing in a natural environment under naturally occurring conditions, no bait, attractant, lure, call, or artificial substance may be placed or otherwise used to entice, attract, or hold polar bears in an area to facilitate viewing opportunities. Any attempt to feed polar bears is an illegal disturbance. When operating within 25 miles of the Beaufort Sea coastline, the permittee will store attractants (human food, dog food, garbage, etc.) in “bear-resistant” containers to minimize attracting polar bears and avoid conditioning bears to human food. Containers must be approved as “bear-resistant.” Information about certified “bear resistant” containers can be found at http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf
- Human-polar bear interactions that have resulted in bears obtaining food; destroying property; or posing a threat to human safety must be reported to the refuge manager immediately at (907) 456-0250, as soon as communication becomes available. Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the refuge manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a written report of the incident within 30 days to the refuge manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts. You may use the attached Bear Incident Report form.

All permitted commercial recreational guide service activities that occur within, or may occur within, 25 miles of the Beaufort Sea coastline will have the following additional condition:

- The permittee must read the Polar Bear Interaction Guidelines (Guidelines) (Arctic Refuge 2010) to these permit Special Conditions. The Guidelines must also be distributed to all employees and clients of the permittee before engaging in any activities on the Refuge. In addition, the following conditions shall be met:
 - Protection of den sites and minimizing disturbance to sows with small cubs is of critical importance. Guides operating under this permit must become knowledgeable of the signs and behaviors indicating the presence of a den and avoid those areas. No person shall approach, or remain, within 1 mile of a polar bear den, or of a sow with small cubs. If at any time the permittee becomes aware of signs indicating their close proximity to a polar bear den, or encounters a sow with small cubs, all members of the guided party must immediately retreat to a distance of at least one mile. If, at any time, the location of a den becomes known to the permittee, no approach shall be made closer than one mile. When operating within 25 miles of the Beaufort Sea coastline, the permittee will store attractants (human food, dog food, garbage, etc.) in “bear-resistant” containers to minimize attracting polar bears and avoid conditioning bears to human food. Containers must be approved as “bear-resistant.” Information about certified “bear resistant” containers can be found at http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf
 - Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or

- harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.
- o Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.

Justification: The objective of guided tour services in national wildlife refuges is to make available a variety of quality opportunities for the public to enjoy outdoor activities where such activities are compatible with the refuge's purposes, resources, and management objectives. Furthermore the congressional committee report on the National Wildlife Refuge System Improvement Act of 1997 states: "It establishes as the policy of the United States that wildlife-dependent recreation, when it is compatible, is a legitimate and appropriate public use of the Refuge System, through which the American public can develop an appreciation for fish and wildlife."

Recreational guides provide a service that visitors often require to access the Refuge and gain an appreciation for its resources. Guided recreational services considered here include activities occurring throughout the year. Guided recreational tour providers are required, as a condition of their permits, to provide information on the primary activity, location, length of stay, group size, and other related items. These reports provide the most accurate and reliable information the U.S. Fish and Wildlife Service (Service) has on Refuge use by visitors. Guided recreational activities contribute to fulfillment of the Refuge System mission by providing access for non-local Refuge visitors and therefore facilitate priority public uses and other uses found compatible in separate compatibility determinations.

Special use permits authorizing the activity will be appropriately conditioned to protect Refuge resources and visitor experiences, and the activity will be monitored to ensure that an appropriate level of use is maintained. Emerging issues will be further monitored and, if needed, stipulated to ensure Refuge resources and visitor experiences are protected. When conducted in accordance with Service regulations, I find that these uses will not materially interfere with or detract from the purposes for which the Refuge was created, including the Wilderness Act purposes for the Refuge wilderness area and fulfillment of the mission of the Refuge System.

Supporting Documents:

- Arctic National Wildlife Refuge. 2010. Polar bear interaction guidelines. U.S. Fish and Wildlife Service, Fairbanks, Alaska. Unpublished. 3pp.
- Christensen Research. 2009. Arctic National Wildlife Refuge visitors study: the characteristics, experiences, and preferences of Refuge visitors. Christensen Research, U. S. Fish & Wildlife Service, and The Aldo Leopold Wilderness Research Institute, Missoula, Montana, USA.
- Interagency Grizzly Bear Committee. IBG Certified bear resistant products webpage. http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf, Accessed 11 Feb 2011.
- U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.
- U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.
- U.S. Fish and Wildlife Service. 2008. Region 7: Bear awareness and firearms safety training policy, Appendix F. U.S. Fish and Wildlife Service. Anchorage, Alaska. Unpublished. 36 pp.
- U.S. Fish and Wildlife Service. 2010. Arctic National Wildlife Refuge Public Use Summary. U.S. Fish and Wildlife Service. Fairbanks, Alaska. Unpublished. 45 pp.
- U.S. Fish and Wildlife Service. 2010. Arctic National Wildlife Refuge visitor services webpage. <http://alaska.fws.gov/nwr/arctic/pdf/pbguidelines2010.pdf>, Accessed 12 Feb 2011.

Refuge Determination:

Refuge Manager/

Project Leader Approval

_____ _____
(Signature) Date

Concurrence:

Regional Chief

National Wildlife

Refuge System

_____ _____
(Signature) Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

 X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Commercial Filming and Audio Recording

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall's sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): Commercial filming and audio recording are existing uses on the Refuge. The use facilitates interpretation and environmental education. The activity was found compatible in the Refuge's 1988 Comprehensive Conservation Plan and again in 1994. This document re-examines the compatibility of this activity.

Commercial filming and audio recording involves seven or fewer people accessing the Refuge by fixed-wing aircraft, perhaps helicopter landings, and staging in one spot or hiking or floating anywhere in the Refuge. Sound-recording devices and batteries are small and are removed after the recording period. This evaluation does not examine the compatibility of a large-scale movie production involving more than seven people or productions using temporary structures or stages. The peak period for this activity is in the summer, though it may be permitted at any time of the year. These activities are authorized by special use permit with special conditions to avoid impacts to Refuge resources and disruption to subsistence users and visitors.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage activities at existing and projected levels. Administrative staff time (as many as 30 staff days per year) is used to prepare special use permits, involving telephone conversations, written correspondence, and personal interaction with permittees regarding ongoing activities. Field work associated with administering the program primarily involves monitoring (when applicable) activities to ensure all activities remain compatible.

Anticipated Impacts of Uses: We anticipate minimal impacts to fish and wildlife resources, other Refuge resources, or other Refuge users. The Refuge's administrative oversight of the activity and comprehensive State and Federal regulations continually evolve to respond to management needs. Compliance with regulations and permit conditions will be routinely checked by Refuge staff. Refuge law enforcement personnel will also help minimize direct impacts from commercial audio-visual activities by enforcing compliance with special use conditions.

Impacts to Refuge habitats may be minimal and transitory because access to the Refuge would be primarily by landing aircraft on gravel bars. Operations on vegetated lowland tundra and disturbance to vegetation would be limited under the stipulations of the special use permit. The introduction of invasive species could affect Refuge resources, although it is not known to have occurred by this activity in the Refuge to date, and staff will continue to

monitor for such occurrences. Temporary displacement and/or disturbance to wildlife can occur, but impacts would likely be short-term and minimal. Impacts to designated wilderness would be negligible because these activities are restricted in designated wilderness areas per the Wilderness Act of 1964 and U.S. Fish and Wildlife Service Wilderness Policy (610FW2.12.D).

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: A special use permit with the following stipulations is required for commercial filming and audio recording. These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

1. Failure to abide by any part of this special use permit; violation of any Refuge related provision in Titles 43 (Part 36) or 50 (subchapters B and C) Code of Federal Regulations; or violation of any pertinent state regulation (e.g., fish or game violation) will with due process, be considered grounds for immediate revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., assistants). Appeals of decisions relative to permits are handled in accordance with 50 Code of Federal Regulations 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of this permit.
3. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
4. The permittee or party chief shall notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of activities allowed by this permit.
5. Prior to beginning any activities allowed by this permit, the permittee shall provide the refuge manager with: (1) the name and method of contact for the field party chief/supervisor; (2) aircraft and other vehicle types to be used and identification information for these vehicles; (3) names of assistant guides and helpers; and (4) any changes in information provided in the original permit application.
6. The refuge manager upon request shall be afforded the opportunity and logistical support from the nearest commercial transportation site to accompany the permittee

for the purpose of inspecting and monitoring permittee activities. A final inspection trip provided by the permittee of the areas of use may be required by the refuge manager to determine compliance with the terms of this permit.

7. This permit authorizes use only on Arctic National Wildlife Refuge lands. Use of land selected by or conveyed to the State of Alaska or North Slope Borough; or a Native corporation or individual is not authorized by this permit.
8. The permittee and permittee's clients do not have the exclusive use of the site(s) or lands covered by this permit.
9. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near subsistence hunters, and damage to cabins, trails, traditional campsites, or caches used by subsistence users.
10. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
11. In accordance with the Wilderness Act (16 U.S. C. 1131-1136) and U.S. Fish and Wildlife Service Wilderness Policy (610 FW 12.2), commercial filming within designated wilderness is prohibited unless previously evaluated and approved by the Refuge manager as appropriate, compatible, and necessary to provide educational information about wilderness uses and values and does not degrade the wilderness character of the area.
12. Construction of cabins, platforms, or other permanent structures is prohibited.
13. Use of off road vehicles is prohibited in designated Wilderness areas. Off-road vehicle use in non-Wilderness areas is limited to events specifically authorized in writing and in advance of and in direct support of the permitted activity. The use of snowmobiles, dog teams, and other means of surface transportation may only be used when adequate snow cover is present and in such a manner as to prevent waste or damage to the Refuge. The phrase "adequate snow cover" means snow is of a depth to protect the underlying vegetation and soil.
14. In accordance with Marine Mammals Management Act (16 U.S.C. 1374), filming of polar bears for education or commercial purposes is not authorized without Department of Management Authority (DMA) approval and/or permits (Section 104(c)(6)).
15. The operation of aircraft at altitudes and in flight paths resulting in the herding, harassment, hazing, or driving of wildlife is prohibited. It is recommended that all aircraft, except for take-off and landing, maintain a minimum altitude of 2,000 feet above ground level (AGL).
16. Helicopter landings are not authorized.

17. Snowmobiles, dog teams, watercraft, and other means of transportation shall be operated in such a manner as to prevent the herding, harassment, hazing, or driving of wildlife for viewing or other purposes.
18. Any human wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the refuge manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the refuge manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident Report form (Service 2008). Animals taken in defense of life or property must be reported to the refuge manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.
19. Use of fuel stoves is encouraged over use of wood for cooking and heating. Only dead and down wood may be used for fires and other purposes. Live and standing dead wood must not be altered or used in a way that causes damage to them.
20. In general and where possible, camps must be located on durable surfaces (snow, sand or gravel). Camps located on vegetation must be relocated at intervals adequate to prevent site impacts. Sites at popular aircraft access points that are already heavily impacted can continue to be used. Along high use rivers and lakes, camps must not be located on vegetated sites that show human caused scuffing or matting of vegetation.
21. All garbage, litter, and debris must be removed from the refuge. Food, garbage, and other materials must be stored to minimize attraction to bears and other wildlife. All evidence of your camp must be obliterated prior to your departure from the site. Equipment and other property must be removed from the refuge upon completion of the permitted activities.
22. Human waste must not be left less than 200 feet from springs, lakes, and streams. Bury waste under soil (or under snow at the ground level during periods when the ground is frozen). Paper toilet tissue, if used, must be packed out or burned completely to ash. Moist towelettes or sanitary products must be removed as trash.
23. The preeminent value of the Arctic Refuge lies in its unsurpassed wilderness condition. The permittee must ensure that all employees and clients seek to minimize the effect of their activities on the wilderness character of the land, wildlife, and the unique experience available there.

All permitted activities that occur within 25 miles of the Beaufort Sea coastline will have the following additional condition:

- The permittee must read the Polar Bear Interaction Guidelines (Guidelines) (Arctic Refuge 2010) to these permit Special Conditions. The Guidelines must also be distributed to all employees and clients of the permittee before engaging in any activities on the Refuge. In addition, the following conditions shall be met:
 - Protection of den sites and minimizing disturbance to sows with small cubs is of critical importance. Guides operating under this permit must become knowledgeable of the signs and behaviors indicating the presence of a den and

avoid those areas. No person shall approach, or remain, within 1 mile of a polar bear den, or of a sow with small cubs. If at any time the permittee becomes aware of signs indicating their close proximity to a polar bear den, or encounters a sow with small cubs, all members of the guided party must immediately retreat to a distance of at least one mile. If, at any time, the location of a den becomes known to the permittee, no approach shall be made closer than one mile. When operating within 25 miles of the Beaufort Sea coastline, the permittee will store attractants (human food, dog food, garbage, etc.) in "bear-resistant" containers to minimize attracting polar bears and avoid conditioning bears to human food. Containers must be approved as "bear-resistant." Information about certified "bear resistant" containers can be found at

http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf

- Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.
- Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.

Justification: Audio-visual production on the Refuge can increase public understanding of the Refuge's wildlife, its history, and its role in managing and protecting natural resources. The policy of the U.S. Fish and Wildlife Service (Service) is to provide Refuge access and/or assistance to legitimate producers of audio and/or visual recordings. Such assistance or access will not be provided if production operations are incompatible with Refuge purposes. Priority consideration is extended to producers of wildlife and natural resource related audio or visual materials (8RM16.1). Regulations concerning filming and recording activities are established in 43 CFR, Subtitle A, Section 5.1. To protect wilderness areas, commercial audio-visual productions in wilderness are managed differently. Section 4(c) of the Wilderness Act of 1964 prohibits commercial enterprises in wilderness. Commercial photography is generally prohibited in wilderness areas unless we determine it is necessary to provide educational information about wilderness uses and values and does not degrade the wilderness character of the area. In cases where we allow such photography as a commercial service, we first evaluate it for appropriateness and compatibility, and—like all commercial audio-visual

activities—we manage the use through an audio-visual productions permit (610FW2.12.D). After fully considering the impacts of these activities, as described previously in the “Anticipated Impacts” section of this document, it is my determination that commercial audio-visual activities within the Refuge do not materially interfere with or detract from the purposes of the Refuge or the mission of the Refuge System.

Supporting Documents:

Arctic National Wildlife Refuge. 2010. Polar bear interaction guidelines. U.S. Fish and Wildlife Service, Fairbanks, Alaska. Unpublished. 3pp.

Interagency Grizzly Bear Committee. IBG Certified bear resistant products webpage. http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf, Accessed 11 Feb 2011.

U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.

U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.

U.S. Fish and Wildlife Service. 2008. Region 7: Bear awareness and firearms safety training policy, Appendix F. U.S. Fish and Wildlife Service. Anchorage, Alaska. Unpublished. 36 pp.

Refuge Determination:

Refuge Manager/

Project Leader Approval

_____ (Signature) _____ Date

Concurrence:

Regional Chief

National Wildlife

Refuge System

_____ (Signature) _____ Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

 X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Commercial Shore-Fast Sea Ice Access

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This is a re-evaluation of this activity, which was found compatible in the 1988 Arctic Refuge Comprehensive Conservation Plan and again in 1994.

The village of Kaktovik has traditionally received commercial goods and heavy equipment, excluding fuel, delivered overland from Deadhorse during winter. Transportation activities usually occur when sea ice travel is safe in mid- to late January through late April. CATCO all-terrain vehicles, also known as Rolligons, and other similar vehicles have been used to haul freight in the past. They weigh several thousand pounds and use extremely large, very low pressure air bags to move across a surface. Depending on the amount of freight, one to four vehicles in a train would complete one to two round trips per year. The equipment follows a west to east path along the shoreline driving on solid ice at least one mile from the shore when practicable. Shore-fast sea ice access by commercial companies is authorized with a special use permit, and special conditions are designed to avoid impacts to Refuge resources and disruption to subsistence users and visitors. To ensure that this activity does not adversely affect polar bears and complies with applicable laws, Section 7 Endangered Species Act and Marine Mammal Protection Act consultations are required for this permit.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage activities at existing and projected levels. Administrative staff time (as many as 15 staff days per year) primarily involves phone conversations, written correspondence, formal or informal consultations with other U.S. Fish and Wildlife Service (Service) offices, and personal interaction with permittees regarding ongoing activities. Field work associated with administering the program primarily involves monitoring (when applicable) activities to ensure all activities remain compatible.

Anticipated Impacts of Uses: We anticipate minimal impacts to fish and wildlife resources, other Refuge resources, or other Refuge users. The Refuge's administrative oversight of the activity and comprehensive State and Federal regulations continually evolve to respond to management needs. Compliance with regulations and permit conditions will be routinely checked by Refuge staff. Refuge law enforcement personnel will also help minimize direct impacts from commercial shore-fast sea ice access activities by enforcing compliance with special use conditions.

Consultations under the Marine Mammal Protection Act and Section 7 of the Endangered Species Act ensure that polar bear and polar bear critical habitat is not adversely affected.

Stipulations are included in the special use permit to ensure that permittee activities avoid polar bear denning habitat, reduce the potential for interactions, and minimize impacts when interactions occur. Impacts to Refuge habitats may be minimal and transitory because access to the Refuge would be primarily by operating on sea ice with applicable restrictions to avoid polar bear denning habitat. Impacts to vegetation will not occur because all travel is restricted to sea ice. The introduction of invasive species could affect Refuge resources, although it is not known to have occurred by this activity in the Refuge to date, and staff will continue to monitor for such occurrences. In rare instances, temporary displacement and/or disturbance to wildlife, particularly polar bears, can occur. Impacts would likely be short-term and minimal because of avoidance measures put in place by permit conditions and Endangered Species Act and Marine Mammal Protection Act consultations.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: A special use permit with the following stipulations is required for commercial shore-fast sea ice access. These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

1. Failure to abide by any part of this special use permit; violation of any refuge related provision in Titles 43 (Part 36) or 50(sub-chapters B and C), Code of Federal Regulations; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., research assistants). Appeals of decisions relative to permits are handled in accordance with Title 50 Code of Federal Regulations Part 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of the permit.
3. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
4. A copy of this permit must be in the permittee's or field party chief's possession at all times while exercising the privileges of the permit.
5. The permittee or party chief must notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of annual activities allowed by this permit.

6. Prior to beginning any activities allowed by this permit, the permittee must provide the refuge manager with: (1) the name(s) and method of contact for the lead field guide(s); (2) aircraft and other vehicle types to be used and identification information for these vehicles; (3) names of assistant guides and helpers; and (4) any changes in information provided in the original permit application.
7. The refuge manager or designee, upon request, shall be afforded the opportunity and logistical support from the nearest commercial transportation site to accompany the permittee for the purpose of inspection and monitoring permittee activities. A final inspection trip provided by the permittee of the areas of use may be required by the refuge manager to determine compliance with the terms of this permit.
8. An annual report of activities conducted on the refuge shall be provided to the refuge manager within 30-days of the permit expiration (normally 1-2 pages).
9. This permit authorizes use only on Arctic National Wildlife Refuge lands. Use of land selected by or conveyed to the State of Alaska or North Slope Borough; or a Native corporation or individual is not authorized by this permit.
10. The permittee and permittee's employees, coworkers, or contractors do not have the exclusive use of the site(s) or lands covered by this permit.
11. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near subsistence hunters, and damage to cabins, trails, traditional campsites, or caches used by subsistence users.
12. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
13. Construction of cabins, platforms, or other permanent structures is prohibited.
14. Crossing barrier islands or overland travel with surface vehicles on refuge lands is prohibited. Entry on refuge lands is permitted only to ensure personnel and equipment safety. Vehicle travel will cease once safety is reached. The refuge manager will be immediately notified.
15. The operation of vehicles resulting in herding, harassment, hazing, or driving of wildlife is prohibited except to accomplish the authorized research. It is recommended that all aircraft, except for take-off and landing, and as necessary for safety, shall maintain a minimum altitude of 2000 feet above ground level (AGL).
16. Any human-wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the refuge manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the refuge manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident

Report form (Service 2008). Animals taken in defense of life or property must be reported to the refuge manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.

17. Unauthorized caches of fuel or other supplies are prohibited. Fuel storage, if any, will be as outlined in the operations plan, preapproved by the manager, and in compliance with regional Service fuel storage policy.
18. All fuel containers with a storage capacity greater than 55 gallons shall be of double-wall construction. All fuel containers, including those emptied, shall be capped when not in actual use.
19. No discharge of petroleum products or toxic materials shall be made within the refuge. All hazardous substance utilized and/or generated by permitted activity shall be contained, controlled and cleaned up. Such measures shall take precedence over all other matters except human safety. All spills or leakage of petroleum products or toxic materials, fires, fatalities, and any other conditions which threaten the refuge's resources, the environment or human safety, shall be reported by the permittee to the refuge manager immediately or as soon as communication can be established.
20. Permittees shall maintain their use areas in a neat and sanitary condition. All combustible solid waste generated by permitted activity shall be incinerated or returned to the permittee's base of operations for disposal in accordance with applicable federal, state, and local standards. All property of the permittee, including non-combustible solid waste, shall be removed from refuge lands upon completion of permitted activities for disposal in accordance with applicable federal, state, and local standards. Latrines must be located at least 200 feet from springs, lakes, and streams to avoid contamination of water resources. Toilet paper must be burned or packed out.
21. The permittee must read the Polar Bear Interaction Guidelines (Arctic Refuge 2010) to these permit Special Conditions. The Guidelines must also be distributed to all employees and clients of the permittee before engaging in any activities on the Refuge. In addition, the following conditions shall be met:
 - a. Protection of den sites and minimizing disturbance to sows with small cubs is of critical importance. Guides operating under this permit must become knowledgeable of the signs and behaviors indicating the presence of a den and avoid those areas. No person shall approach, or remain, within 1 mile of a polar bear den, or of a sow with small cubs. If at any time the permittee becomes aware of signs indicating their close proximity to a polar bear den, or encounters a sow with small cubs, all members of the party must immediately retreat to a distance of at least one mile. If, at any time, the location of a den becomes known to the permittee, no approach shall be made closer than one mile.
 - b. When operating within 25 miles of the Beaufort Sea coastline, the permittee will store attractants (human food, dog food, garbage, etc.) in "bear-resistant" containers to minimize attracting polar bears and avoid conditioning bears to human food. Containers must be approved as "bear-resistant." Information about certified "bear resistant" containers can be found at http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf (Interagency Grizzly Bear Committee, 2011).

- c. Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the refuge manager and to the U.S. Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the refuge manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.
22. The preeminent value of the Arctic Refuge lies in its unsurpassed wilderness condition. The permittee must ensure that all employees and clients seek to minimize the effect of their activities on the wilderness character of the land, wildlife, and the unique experience available there.

Justification: Commercial shore-fast sea ice access by CATCO or other similar vehicles to the Village of Kaktovik and other inholdings provides one of the least damaging modes of heavy freight transportation consistent with the adequate and feasible access guaranteed by ANILCA, Section 1110. Additionally, use of shore-fast sea is the only viable, economical option in the winter to transport large construction equipment, building supplies, and other such commercial goods. When working in the parameters of the permit special conditions and requirements of Endangered Species Act and Marine Mammal Protection Act consultations, sea ice travel produces no known degradation to the substrate or polar bear critical habitat, and negligible displacement of polar bear or other wildlife found along the coast when sea ice travel is practicable. After fully considering the impacts of these activities, as described previously in the “Anticipated Impacts” section of this document, it is my determination that commercial shore-fast sea ice access activities in the Refuge do not materially interfere with or detract from the purposes of the Refuge or the mission of the Refuge System.

Supporting Documents:

- Arctic National Wildlife Refuge. 2010. Polar bear interaction guidelines. U.S. Fish and Wildlife Service, Fairbanks, Alaska. Unpublished. 3pp.
- Interagency Grizzly Bear Committee. IBG Certified bear resistant products webpage. http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf, Accessed 11 Feb 2011.
- U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.
- U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.
- U.S. Fish and Wildlife Service. 2008. Region 7: Bear awareness and firearms safety training policy, Appendix F. U.S. Fish and Wildlife Service. Anchorage, Alaska. Unpublished. 36 pp.

Refuge Determination:

Refuge Manager/

Project Leader Approval _____
(Signature) _____ Date

Concurrence:

Regional Chief

National Wildlife

Refuge System _____
(Signature) _____ Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Uses: Non-Wildlife-Dependent Recreational Activities

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This determination evaluates public uses not covered in other compatibility determinations, including camping, hiking, backpacking, firewood cutting for recreational purposes, boating (motorized and non-motorized), plant gathering (including berry picking), rock gathering, cross-country skiing, dog sledding, skijoring, snowmobiling, beach use, packrafting, snowshoeing, and other general outdoor recreation when the uses are not associated with one of the other uses evaluated elsewhere for compatibility. This is a re-evaluation of the compatibility of non-wildlife-dependent recreational uses on Federal lands in Arctic Refuge. Most of these activities were originally found to be compatible in 1988 during the development of the original Arctic Refuge Comprehensive Conservation Plan and again determined to be compatible in 1994.

Means of accessing the Refuge for these uses may include commercial or non-commercial fixed-wing aircraft, packraft, motorized and non-motorized boat, snowmobile, etc. Non-wildlife-dependent recreational activities occur year-round. They may occur as activities unto themselves or in association with other uses.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage these activities at current and projected levels. Administrative staff time primarily involves phone conversations, written correspondence, public use surveys, and interaction with visitors at the interagency visitor center. Staff will also be involved with subsequent step-down planning for visitor use management and with monitoring recreational activities.

Field work associated with administering this use primarily involves conducting patrols to increase visitor compliance with State and Federal regulations. Refuge staff members opportunistically conduct outreach with visitors to minimize the impacts of camping; improve understanding of local residents' subsistence activities; and increase awareness of private inholdings and property. Outreach efforts at the Arctic Interagency Visitor Center in Coldfoot emphasize Leave No Trace camping and hiking practices.

Anticipated Impacts of Use(s): These activities are anticipated to have negligible effects on most Refuge resources, but effects may vary on wildlife and other visitors depending on the type of activity. For example, the sounds of snowmobiles could affect visitors' experience of solitude and natural quiet. Temporary displacement and/or disturbance to wildlife can occur

in response to movement of motorized or non-motorized means of transportation, including boating, hiking, skiing, etc., but impacts would likely be short-term and minimal.

Visitors engaged in non-commercial, non-wildlife-dependent activities may encounter or contribute to the following emerging issues:

1. *Perceived Crowding and User Conflicts* - Simultaneous visits by hunting and recreation groups in some high-use areas due to weather or high demand have led to a reported erosion of visitor experiences and user conflicts.
2. *Physical impacts* - Human waste accumulation and localized vegetation damage has been reported, either from camping or aircraft landing on non-durable surfaces.
3. *Dalton Highway-based Visitation* - There is high probability that the western boundary of the Refuge will continue to become more popular with visitors as awareness of relatively economical Dalton Highway-based access continues to rise. Arctic Refuge managers now consider the Dalton Highway the Refuge's "front country."
4. *Packrafting* - The emergence of commercially-manufactured, lightweight, backpackable inflatable rafts is making rivers and streams that were once unfloatable (due to low water or lack of access) more available to a range of users. This could potentially change the patterns of use on Arctic Refuge.

During peak visitation, limited landing areas in some drainages may contribute to perceived crowding and user conflicts. Additionally, some localized vegetation damage caused by landing aircraft or camping on non-durable surfaces has been reported. These are emerging issues that need to be further monitored and evaluated. Future actions may be needed to address these concerns.

Impacts associated with this activity could be minimal and transitory to minor, and long-term. Disturbance to vegetation is site specific, minor, and long-term and would likely be restricted to campsites that receive repetitive use and to aircraft landings on non-durable surfaces. To minimize impacts from aircraft landings, we limit where commercial operators can land. Access to the Refuge during summer months would be by landing aircraft primarily on gravel bars. Winter access would be by aircraft fitted with skis. Landings on vegetated lowland tundra and disturbance to vegetation outside established landing areas would be limited under the stipulations of the special use permit. Although non-commercial aircraft are not required to acquire a special use permit, when possible through outreach, we encourage those operators to land on durable surfaces such as gravel bars and to avoid vegetated tundra or soft surfaces. However, if damage to non-durable surface is found, it may be necessary to further limit aircraft landings at those sites to reduce impacts to Refuge resources. Additionally, the introduction of invasive species could affect Refuge resources, although it is not known to have occurred by aircraft landings or any of the non-wildlife-dependent recreational activities in the Refuge to date. Staff will continue to monitor areas for such occurrences. Temporary displacement and/or disturbance to wildlife can occur in response to low-level overflights and during takeoffs and approaches to landings, but impacts would likely be short-term and minimal.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below): Use is not compatible Use is compatible

Stipulations Necessary to Ensure Compatibility: Special use permits are not required for these non-wildlife-dependent recreational activities, so there are no associated stipulations. However, visitors will be required to comply with existing State and Federal regulations. The Refuge provides information on Leave No Trace principles and other means to minimize impacts to Refuge resources.

Justification: These non-wildlife-dependent, recreational activities provide opportunities for the public to engage in a variety of outdoor activities, which may increase public appreciation of the Refuge and its resources. Wilderness and recreation values, as well as establishing purposes of the Refuge, are preserved by promoting wilderness appreciation and wildland pursuits. The activities have been found compatible when conducted in relation to other Refuge uses such as wildlife observation and photography, hunting, fishing, trapping, or subsistence activities. While Refuge visitors may come solely to engage in these non-priority public use activities, they are more often associated with wildlife dependent activities or other activities already evaluated for compatibility such as commercially guided recreational activities or commercial air transportation. Emerging issues will be further monitored and, if needed, regulated to ensure Refuge resources and visitor experiences are protected. When conducted in accordance with U.S. Fish and Wildlife Service (Service) regulations, I find that these uses will not materially interfere with or detract from the purposes for which the Refuge was created, including Wilderness Act purposes for the Refuge wilderness area and fulfillment of the mission of the Refuge System.

Supporting Documents:

U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.

U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.

U.S. Fish and Wildlife Service. 1994. Compatibility Determination for Non-wildlife Dependent Recreational Activities. U.S. Fish and Wildlife Service, Fairbanks, Alaska.

DRAFT COMPATIBILITY DETERMINATION

Use: Reburial of Human Remains per State and Federal Guidelines

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. *to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. *to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. *to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. *to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): The Refuge anticipates requests to rebury human remains eroding from recorded and unrecorded prehistoric sites and remains that have been removed from prehistoric sites. The inadvertent discovery section of the Native American Graves Protection and Repatriation Act of 1990 (Public Law 101-601) requires that the land management agency identify and notify the closest Native group, and—if requested—provide for the repatriation of the remains. With this in mind, the Refuge has prepared this compatibility determination to cover anticipated burial requests during the next 10 years. Each proposed burial and its proposed reburial location would need to be approved by the regional historic preservation officer, who will ensure compliance with the National Historic Preservation Act, Section 106, prior to issuance of a permit for this activity.

Reburial of repatriated human remains would take place near the place of discovery of such remains or near their original burial place. Each burial would involve a small excavation with hand tools. Impacts to Refuge resources would be negligible and short-term, with no foreseeable long-term effects, and would not affect subsistence use of the Refuge. A copy of the Global Positioning System (GPS) coordinates and contents of the burial site will be filed at Refuge headquarters and with the regional historic preservation officer. The remains should be buried with a modern object (e.g., coin, dated button) to indicate it is a historical reburial.

Availability of Resources: Except for issuance of the permit, no Refuge resources would be needed to administer use. All activities associated with use would be accomplished by the permittee.

Anticipated Impacts of Use(s): Reburials would result in minimal and short-term impacts to Refuge resources, involving a few small-scale excavations with hand tools and then interment of the remains.

Public Review and Comment: Public comment was solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: A special use permit with the following stipulations is required for reburial of human remains per State and Federal guidelines. These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

1. Failure to abide by any part of this special use permit; violation of any refuge related provision in Titles 43 (Part 36) or 50 (Subchapters B and C) Code of Federal Regulations; violation of the Marine Mammal Protection Act of 1972; violation of the Endangered Species Act of 1973; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for immediate revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., assistants). Appeals of decisions relative to permits are handled in accordance with 50 Code of Federal Regulations 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of this permit.
3. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
4. A copy of this permit must be in the permittee's or field party chief's possession at all times while exercising the privileges of the permit.
5. The permittee must notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of annual activities allowed by this permit.
6. Prior to beginning any activities allowed by this permit, the permittee shall provide the refuge manager with: (1) the name and method of contact for the field party chief/supervisor; (2) aircraft and other vehicle types to be used and identification information for these vehicles; (3) names of assistant guides and helpers; and (4) any changes in information provided in the original permit application.
7. This permit authorizes use only on Arctic National Wildlife Refuge lands. Use of land selected by or conveyed to the State of Alaska or North Slope Borough; or an individual is not authorized by this permit. The permittee and permittee's clients do not have the exclusive use of the site(s) or lands covered by this permit, except for the authorized camp facilities (if applicable).
8. This permit does not authorized use of Native selected lands within the permit area unless approved by the refuge manager. The applicant must provide the refuge manager with written views from the affected Native organization(s) before authorization to use the selected lands can be considered. However, if the affected Native organization(s) provide no response to the permittee's request for views, the permittee may provide the refuge manager with a copy of the letter that he/she sent requesting the views of Native organization(s). If any of the selected lands are

conveyed during the term of this permit, the permittee will no longer be authorized to use those lands.

9. The permittee and permittee's clients do not have the exclusive use of the site(s) or lands covered by this permit.
10. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near subsistence hunters, and damage to cabins, trails, traditional campsites, or caches used by subsistence users.
11. Any action by a permittee or the permittee's employees which unduly interferes with or harasses other refuge visitors or impedes access to any site is strictly prohibited. Examples of prohibited acts include, but are not limited to, low flights over camps or persons at less than 500 feet (unless landing) and parking aircraft or placing other objects (rocks, tents, etc.) on any landable area so as to restrict use by other aircraft or persons.
12. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
13. Construction of cabins, platforms, or other permanent structures is prohibited. Wall tents with floors that are completely removed from the refuge at the end of field season are allowed.
14. The construction of landing strips or pads is prohibited. Incidental hand removal of rocks and other minor obstructions may be permitted.
15. The permittee must maintain their use areas in a neat and sanitary condition. Human waste must not be left less than 200 feet from springs, lakes, and streams. Bury waste under soil (or under snow at the ground level during periods when the ground is frozen). Paper toilet tissue, if used, must be packed out or burned completely to ash. Moist towelettes or sanitary products must be removed as trash.
16. All garbage and non-combustible debris will be removed from the refuge (not buried). Food, garbage, and supplies will be stored so as not to attract wildlife. All equipment and property must be removed from refuge lands upon completion of permitted activities.
17. Any human-wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the Refuge manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the Refuge manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident Report form (Service 2008). Animals taken in defense of life

- or property must be reported to the Refuge manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.
18. The operation of aircraft at altitudes and in flight paths resulting in the herding, harassment, hazing, or driving of wildlife is prohibited. It is recommended that all aircraft, except for take-off and landing, maintain a minimum altitude of 2,000 feet above ground level (AGL).
 19. Helicopter landings are not authorized.
 20. The use of off-road vehicles (except snow machines with adequate snow cover) is prohibited. The use of snowmobiles, dog teams, and other means of surface transportation may only be used when adequate snow cover is present and in such a manner as to prevent waste or damage to the Refuge. The phrase "adequate snow cover" means snow is of a depth to protect the underlying vegetation and soil.
 21. Snowmobiles, dog teams, watercraft, and other means of transportation shall be operated in such a manner as to prevent the herding, harassment, hazing, or driving of wildlife for viewing or other purposes.
 22. Reburial of repatriated human remains will take place near the place of discovery of such remains and/or near the place of their original burial. To avoid the possibility of disturbing additional human remains, reburials should not take place at the original burial location or a known archaeological site.
 23. The permittee or permittees' representatives will make the smallest possible excavation, using only hand tools.
 24. The Global Positioning System (GPS) coordinates and a list of the contents of the burial site will be filed at Refuge headquarters and with the Regional Historic Preservation Officer within 30 days of burial.
 25. Remains shall be buried with a modern object (e.g., coin, button, etc.- with date) to indicate that it is an historical reburial.
 26. An annual report of activities conducted on the Refuge shall be provided to the refuge manager within 30-days of the permit expiration (normally 1-2 pages). The Global Positioning System (GPS) coordinates should be provided to the refuge manager in the annual report along with what type of maintenance or activity was performed.

Justification: This proposed use is necessary for the Refuge to comply with the Native American Graves Protection and Repatriation Act of 1990 (Public Law 101-601). The use is limited and short-term and thus will result in minimal impact to Refuge resources. After fully considering the impacts of these activities, as described previously in the "Anticipated Impacts" section of this document, it is my determination that reburial of human remains in the Refuge does not materially interfere with or detract from the purposes of the Refuge or the mission of the Refuge System.

Supporting Documents:

- U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.
- U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.
- U.S. Fish and Wildlife Service. 2008. Region 7: Bear awareness and firearms safety training policy, Appendix F. U.S. Fish and Wildlife Service. Anchorage, Alaska. Unpublished. 36 pp.

Refuge Determination:

Refuge Manager/

Project Leader Approval

_____ Date
(Signature)

Concurrence:

Regional Chief

National Wildlife

Refuge System

_____ Date
(Signature)

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

- _____ Categorical Exclusion without Environmental Action Memorandum
- _____ Categorical Exclusion and Environmental Action Memorandum
- _____ Environmental Assessment and Finding of No Significant Impact
- X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Recreational (General) Fishing

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This is a re-evaluation of the compatibility of non-commercially-supported general fishing as a use of Federal lands in Arctic Refuge. This activity was originally found to be compatible in 1988 during the development of the original Arctic Refuge Comprehensive Conservation Plan and again determined to be compatible in 1994.

Means of access for general fishing include fixed-wing airplanes, motorboats, non-motorized boats, hiking, and snowmobiling. General fishing is associated with other activities, such as camping, river rafting, hunting, etc. Fishing occurs spring through winter and is managed under State of Alaska fishing regulations (5AAC). The major rivers on the Refuge have good recreational fishing opportunities, based on reasonable accessibility by float plane or boat, and sustainable populations of anadromous and/or resident fish. There are also recreational fish resources in the Refuge's coastal system. Although all these drainages provide opportunities for day-use and overnight primitive camping, distance and cost of traveling to these areas for day-use fishing is prohibitive for most visitors.

Fishing patterns are estimated primarily through direct observation by Refuge staff and reports from commercial aircraft operators and from local residents. Use is concentrated in the summer months on rivers when flows are amenable to river travel. This activity is often secondary or is peripheral to other activities, which have been evaluated in separate compatibility determinations.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage general fishing at existing levels. Administrative staff time primarily involves phone conversations and written correspondence, and could involve engagement in regulatory review.

Field work associated with administering the program primarily involves conducting law enforcement patrols to ensure recreational users' compliance with State fishing regulations and Refuge regulations and to work with adjacent land owners to monitor public use. It is estimated that less than two weeks of staff time is required to manage this use.

Anticipated Impacts of Uses: The Federal Subsistence Board and State Board of Fisheries regularly adopt regulations in response to fish population levels and to address issues of fishery allocation. Providing an opportunity for continued subsistence uses of fishery resources by local residents receives the highest priority from the Federal Subsistence Board. Recent, 1998 to present, Chinook salmon returns have been characterized as poor, and

managers (State and Federal) may restrict recreational use of this resource. Chum salmon experienced a worrisome decline in the late 1990s; however, recent run strengths indicate that a general fishery on chum salmon currently is sustainable.

At current levels, general fishing harvests require little to no monitoring, and there are no anticipated deleterious effects on fish habitat. Should intensity of use increase, Refuge staff would increase monitoring efforts. If necessary, Refuge staff would review regulations and propose changes to protect fishery resources and subsistence fishing opportunities for people living near the Refuge. We will continue to work with the Fairbanks Fish and Wildlife Field Office to implement inventories and conduct studies aimed at better understanding fish populations on the Refuge.

Visitors engaged in general fishing activities may encounter or contribute to the following emerging issues:

1. *Perceived Crowding and User Conflicts* - Simultaneous visits by hunting and recreation groups in some high-use areas due to weather, or high demand, have led to a reported erosion of visitor experiences and user conflicts.
2. *Physical impacts* - Human waste accumulation and localized vegetation damage has been reported, either from camping or aircraft landing on non-durable surfaces.
3. *Dalton Highway-based Visitation* - There is high probability that the western boundary of the Refuge will continue to become more popular with visitors as awareness of relatively economical Dalton Highway-based access continues to rise. Arctic Refuge managers now consider the Dalton Highway the Refuge's "front country."

During peak visitation, limited landing areas in some drainages may contribute to perceived crowding and user conflicts. Additionally, some localized vegetation damage caused by landing aircraft or camping on non-durable surfaces has been reported. These are emerging issues that need to be further monitored and evaluated. Future actions may be needed to address these concerns.

Impacts associated with this activity could be minimal and transitory to minor, and long-term. Disturbance to vegetation is site specific, minor, and long-term and would likely be restricted to campsites that receive repetitive use and to aircraft landings on non-durable surfaces. To minimize impacts from aircraft landings, we limit where commercial operators can land. Access to the Refuge during summer months would be by landing aircraft primarily on gravel bars. Winter access would be by aircraft fitted with skis. Landings on vegetated lowland tundra and disturbance to vegetation outside established landing areas would be limited under the stipulations of the special use permit. Although non-commercial aircraft are not required to acquire a special use permit, when possible through outreach, we encourage those operators to land on durable surfaces such as gravel bars and to avoid vegetated tundra or soft surfaces. However, if damage to non-durable surface has been found, it may be necessary to further limit aircraft landings at those sites to reduce impacts to Refuge resources. Additionally, the introduction of invasive species could affect Refuge resources, although it is not known to have occurred by aircraft landings or general fishing activities in the Refuge to date. Staff will continue to monitor areas for such occurrences. Temporary displacement and/or disturbance to wildlife can occur in response to low-level overflights and during takeoffs and approaches to landings, but impacts would likely be short-term and minimal.

Public Review and Comment:

Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: Special use permits are not required for general fishing activities, so there are no associated stipulations. However, visitors will be required to comply with existing State and Federal regulations. The Refuge provides information on Leave No Trace principles and other means to minimize impacts to Refuge resources.

Justification: The National Wildlife Refuge System Administration Act of 1966, as amended by the Refuge Improvement Act of 1997, identifies compatible general fishing as one of six priority public uses of national wildlife refuges. The law states that, when managed in accordance with principles of sound fish and wildlife management, administration of these uses has been, and is expected to continue to be, generally compatible and that priority public uses should receive enhanced consideration over other public uses in refuge planning and management. The law also states that the U.S. Fish and Wildlife Service (Service) should provide increased opportunities for parents and their children to safely engage in traditional outdoor activities such as fishing.

Means of access by airplanes, motorboats, snowmobiles and non-motorized means for traditional activities, as provided by ANILCA and as currently regulated by the Service, have not materially interfered with or detracted from Refuge purposes. Should motorized transportation in support of general fishing increase to levels where it interferes with Refuge purposes, staff would work with anglers, air operators, and/or Alaska Department of Fish and Game to address impacts and resolve compatibility concerns.

General fishing is an activity that Congress intended to preserve when the Refuge was designated by ANILCA. As stated previously, recreational fishing in the Refuge provides the public with safe and unique recreational fishing opportunities of a quality found few places in the world. The State Board of Fisheries and the Federal Subsistence Board, respectively, review regulations to manage public fishery resources and to provide the continued opportunity for subsistence fishing by local residents in response to changing fish population levels and harvest patterns. These regulations provide adequate protection for the Refuge's fishery resources and continued subsistence opportunities in balance with other Refuge purposes. Emerging issues will be further monitored and, if needed, regulated to ensure Refuge resources and visitor experiences are protected. When conducted in accordance with Service regulations, I find that these uses will not materially interfere with or detract from the purposes for which the Refuge was created, including Wilderness Act purposes for the Refuge wilderness area and fulfillment of the mission of the Refuge System.

Supporting Documents:

U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.

U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.

Refuge Determination:

Refuge Manager/

Project Leader Approval _____
 (Signature) Date

Concurrence:

Regional Chief

National Wildlife

Refuge System _____
 (Signature) Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

- _____ Categorical Exclusion without Environmental Action Memorandum
- _____ Categorical Exclusion and Environmental Action Memorandum
- _____ Environmental Assessment and Finding of No Significant Impact
- X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: General Hunting

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): General or non-commercially-supported hunting is re-evaluated in this determination. General hunting was found to be compatible in the 1988 Comprehensive Conservation Plan and was again determined to be compatible in 1994. Associated activities such as camping, backpacking, hiking, and other incidental uses are considered part of general hunting. Allowable temporary facilities include tents, tent frames, tent platforms, weather ports, and caches.

The State of Alaska divides the state into game management units (GMUs). The following GMUs fall within the boundaries of the Refuge: 25A, 25B, 25D, 26B, and 26C. General hunters are required to follow current State and Federal hunting regulations, including the requirements for applicable licenses and permits. The State of Alaska is primarily responsible for managing fish and resident wildlife through setting seasons, bag limits, methods and means of harvest, and licensing of commercial guiding operators.

The majority of general hunting has been for moose, caribou and Dall's sheep, but hunting for black bear, grizzly bear, wolf, small game, and waterfowl also occurs on the Refuge, as allowed under State of Alaska hunting regulations (5 AAC). Small-game and waterfowl hunting often occur in conjunction with big-game hunts. Recreation settings on the Refuge are remote. The number of recreational use-days for small-game and waterfowl hunting on the Refuge is unknown but thought to be minimal.

Current means of access to the Refuge include fixed-wing aircraft, motorboats, snowmobiles, and non-motorized means. However, most general hunters use an air-taxi or air transporter to access the Refuge. On average, it appears that hunters make up 28 percent, and recreational visitors make 72 percent, of the total number of commercially-supported visitors. An unknown number of general hunters use their personal airplanes (Service 2010).

Levels of general hunting are estimated primarily from direct observation by Refuge staff, annual reports provided by commercial air transportation services that transport most general hunters to locations in the Refuge, and information from State harvest tickets. Permitted air transportation operators provide visitor information, including primary activity, location, length of stay, and group size.

Availability of Resources: Current Refuge personnel are not adequate to manage general hunting at current and projected levels. The Plan includes an objective to hire a law enforcement officer, and a staffing analysis has been conducted to see how many additional staff are needed. In the interim, we share resource across refuges and the U.S. Fish and

Wildlife Service (Service), and we coordinate with State troopers and visitor services staff to manage current levels of general hunting.

Staff time in the office primarily involves phone conversations and written correspondence to answer questions from hunters, attendance at regulatory meetings, and engagement in the regulatory review process. Field work associated with administering the program primarily involves conducting law enforcement patrols to ensure hunter compliance with State and Federal refuge regulations. Refuge staff members opportunistically conduct outreach to hunters to increase their awareness of national wildlife refuge programs, the status of local wildlife populations, the relationship of regulations to sustainable yield, and the importance of knowing land ownership and regulatory boundaries in locations where hunting activities are to take place.

Anticipated Impacts of Uses: The Refuge is directly involved in review and implementation of the regulatory process and administrative oversight of general hunting. Because of combined regulatory and law enforcement efforts of the State and Refuge personnel, direct impacts from general hunting under existing management should have minimal impacts to fish and wildlife resources, other Refuge resources, or other Refuge users.

Commercial air transportation services are discouraged from dropping general hunters in areas used by subsistence hunters. Most subsistence hunting occurs in areas of the Refuge where Refuge and private lands are intermingled. Boundaries of private lands can be difficult to distinguish, and inadvertent trespass could occur because non-local hunters would not be aware of the mixed ownership. Refuge staff members are aware of these potential conflicts and monitor use levels each hunting season. Should conflicts arise, the Service will work to address them through the Federal Subsistence Board and Alaska Board of Game. These boards have established regulations aimed at managing populations of animals at sustainable levels and preventing conflicts between user groups.

Visitors engaged in general hunting activities may encounter or contribute to the following emerging issues:

1. *Perceived Crowding and User Conflicts* - Simultaneous visits by hunting and recreation groups in some high-use areas due to weather or high demand have led to a reported erosion of visitor experiences and user conflicts.
2. *Physical impacts* - Human waste accumulation and localized vegetation damage has been reported, either from camping or aircraft landing on non-durable surfaces.
3. *Dalton Highway-based Visitation* - There is high probability that the western boundary of the Refuge will continue to become more popular with visitors as awareness of relatively economical Dalton Highway-based access continues to rise. Arctic Refuge managers now consider the Dalton Highway the Refuge's "front country."

During peak visitation, limited landing areas in some drainages may contribute to perceived crowding and user conflicts. Additionally, some localized vegetation damage caused by landing aircraft or camping on non-durable surfaces has been reported. These are emerging issues that need to be further monitored and evaluated. Future actions may be needed to address these concerns.

Impacts associated with this activity could be minimal and transitory to minor, and long-term. Disturbance to vegetation is site specific, minor, and long-term and would likely be restricted to campsites that receive repetitive use and to aircraft landings on non-durable surfaces. To minimize impacts from aircraft landings, we limit where commercial operators can land. Access to the Refuge during summer months would be by landing aircraft primarily on gravel bars. Winter access would be by aircraft fitted with skis. Landings on vegetated lowland tundra and disturbance to vegetation outside established landing areas would be limited under the stipulations of the special use permit. Although non-commercial aircraft are not required to acquire a special use permit, we encourage those operators to land on durable surfaces such as gravel bars and to avoid vegetated tundra or soft surfaces. However, if damage to non-durable surfaces has been found, it may be necessary to further limit aircraft landings at those sites to reduce impacts to Refuge resources. Temporary displacement and/or disturbance to wildlife can occur with any form of motorized transport (Calef et al. 1976; Olliff et al. 1999; Creel et al. 2002), but impacts would likely be short-term and minimal. A large increase in general hunting on the Refuge could cause user conflicts, wildlife disturbance, and—in some cases—undermine the wilderness character of the Refuge. To minimize impacts on lands and resources in the Refuge, law enforcement patrols will be routinely conducted to maximize compliance with existing policies, rules, and regulations. The introduction of invasive plant species carried on boats, people, animals, and aircraft could affect Refuge resources, although no known introductions have occurred on the Refuge to date. Refuge staff will continue to monitor for such occurrences.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: Special use permits are not required for general hunting activities, so there are no associated stipulations. However, visitors will be required to comply with existing State and Federal regulations. The Refuge provides information on Leave No Trace principles and other means to minimize impacts to Refuge resources.

Justification: The National Wildlife Refuge System Administration Act of 1966 (as amended by the Refuge Improvement Act of 1997) identifies general hunting as one of six priority public uses of National Wildlife Refuge System lands. The law states that, when managed in accordance with principles of sound fish and wildlife management, administration of this use has been, and is expected to continue to be, generally compatible, and that priority public uses should receive enhanced consideration over other public uses in refuge planning and management. The law also states that the Service should provide increased opportunities for

families to experience compatible wildlife-dependent recreation, particularly opportunities for parents and their children to safely engage in traditional outdoor activities such as hunting.

Means of access by airplanes, motorboats, snowmobiles and non-motorized means for traditional activities, as provided by ANILCA and as currently regulated by the Service, have not materially interfered with or detracted from Refuge purposes. Should motorized transportation in support of hunting increase to levels where it interferes with Refuge purposes, staff would work with hunters, commercial air operators, and/or Alaska Department of Fish and Game to address impacts and resolve compatibility concerns.

General hunting is an activity that Congress intended to preserve when the Refuge was designated by ANILCA. As stated previously, general hunting in the Refuge provides the public with quality, safe, and unique general hunting opportunities found few places in the world. To ensure sustainability of harvest of local residents, the State Board of Game and the Federal Subsistence Board regularly adopt regulations in response to wildlife population levels and management needs. These regulations provide adequate protection for the Refuge's wildlife resources and continued hunting opportunities, in balance with other Refuge purposes. Emerging issues will be further monitored and, if needed, regulated to ensure Refuge resources and visitor experiences are protected. When conducted in accordance with Service regulations, I find that these uses will not materially interfere with or detract from the purposes for which the Refuge was created, including Wilderness Act purposes for the Refuge wilderness area and fulfillment of the mission of the Refuge System.

Supporting Documents:

- Calef, G.W., E.A. DeBock, and G.M. Lortie. 1976. The reaction of barren-ground caribou to aircraft. *Arctic* 29(4):201-212.
- Creel, S., J.E. Fox, A. Hardy, J. Sands, B. Garrott, and R.O. Peterson. 2002. Snowmachine activity and glucocorticoid stress responses in wolves and elk. *Conservation Biology* 16:809-814.
- Olliff, T., K. Legg, and B. Kaeding, editors. 1999. Effects of winter recreation on wildlife of the Greater Yellowstone Area: a literature review and assessment. Report to the Greater Yellowstone Coordinating Committee. Yellowstone National Park, Wyoming. 315 pages.
- U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.
- U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.
- U.S. Fish and Wildlife Service. 2010. Arctic National Wildlife Refuge Public Use Summary. U.S. Fish and Wildlife Service. Fairbanks, Alaska. Unpublished. 45 pp.

Refuge Determination:

Refuge Manager/

Project Leader Approval _____
(Signature) Date

Concurrence:

Regional Chief

National Wildlife

Refuge System _____
(Signature) Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Furbearer Trapping (Non-Subsistence)

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This determination re-evaluates the compatibility of furbearer trapping on the Refuge by trappers who are not qualified subsistence users because of residence in a non-rural area, such as Fairbanks. Trapping was found to be a compatible use in the Refuge's 1988 Comprehensive Conservation Plan, and then again in 1994. Wolves, fox, beaver, marten, lynx, snowshoe hares, wolverine, ermine, and river otters are regularly trapped on the Refuge. Trapping occurs during winter on the Refuge in accordance with State of Alaska trapping regulations and seasons (5 AAC). Trapping activity has generally been decreasing since the 1980s. Access to trapping areas is primarily by fixed-wing aircraft and snowmachine. Currently, only a small number of traplines are active. Trappers often use one or more permitted cabins to support the activity. Compatibility determinations for trapping cabins will not be completed in the Plan; they will be done for each cabin separately at the time of permit renewal.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage trapping on the Refuge.

Anticipated Impacts of Uses: No long-term adverse impacts on wildlife populations or other Refuge resources are likely to occur due to continuation of trapping on the Refuge. State trapping regulations are established to ensure healthy, sustainable furbearer populations. Trapping can be an integral part of furbearer studies whenever biologists have sufficient funding to conduct trapper interviews and occasionally purchase large numbers of carcasses to determine population parameters such as productivity and reproductive history. Intensity of harvest and density of traplines on the Refuge is very low, and overall trapping pressure has declined since the 1980s. Therefore, except for the occasional harvest of non-targeted animals, trapping has little impact on the Refuge. Diminishing trapping activity seems to have been the result of low fur prices and high energy prices. Refuge staff will monitor harvest and attempt to determine trends through field observations and trapper interviews. If population concerns manifest, the U.S. Fish and Wildlife Service (Service) will become engaged in review of the appropriate State of Alaska trapping regulations. Refuge staff will also be engaged in field enforcement of trapping regulations.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: Special use permits are not required for furbearer trapping activities, so there are no associated stipulations. However, visitors will be required to comply with existing State and Federal regulations. The Refuge provides information on Leave No Trace principles and other means to minimize impacts to Refuge resources. Additionally, those trappers utilizing trapping cabins on the Refuge will need to abide by stipulations for trapping cabin permits.

Justification: Furbearer trapping is among the traditional uses of Arctic Refuge that ANILCA sought to preserve. The entire Refuge is open to this use, which is conducted under State trapping regulations. No special use permit is necessary for trapping, although a permit is necessary to use a cabin in association with trapping activity. After fully considering the impacts of these activities, as described previously in the “Anticipated Impacts” section of this document, it is my determination that non-subsistence furbearer trapping in the Refuge does not materially interfere with or detract from the purposes of the Refuge or the mission of the Refuge System.

Supporting Documents:

U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.

U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.

Refuge Determination:

Refuge Manager/

Project Leader Approval _____
(Signature) Date

Concurrence:

Regional Chief

National Wildlife

Refuge System _____
(Signature) Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Uses: Scientific Research

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This compatibility determination addresses the wide variety of research activities that have historically occurred or may occur on the land now comprising Arctic Refuge. Researchers must obtain a special use permit from the Refuge manager. This compatibility determination addresses the full spectrum of uses associated with the scientific research of fish, wildlife, habitat, and other Refuge resources. It includes all means of access, lodging, facilities, and other elements that would be included in a typical research proposal. The scope of this determination includes research conducted by all agencies or entities other than the U.S. Fish and Wildlife Service (Service) and the Alaska Department of Fish and Game (ADFG). If ADFG were to propose a research project outside of the parameters of the existing Master Memorandum of Agreement with the Service, the terms of this compatibility determination would most likely apply to any activities proposed. If not, a separate compatibility determination would be required. Research conducted by the Service or where the Service is acting as a major partner is considered an administrative activity under 603 FW 2.10 published in the Federal Register (Vol. 65, No. 202).

Specific authorized means of access for all areas on the Refuge will be noted in each special use permit. Potential means of access include fixed-wing aircraft, helicopter, motorized or non-motorized boat, snowmobile, dogsled, foot, snowshoes, and cross-country skis. Logistical support may include base camps and spike camps with tents, tent frames, weather ports, removable floors, existing administrative cabins, satellite communication systems, human waste management, and temporary fuel and supply caches. Authorizations for all activities and forms of access included in this compatibility determination in designated wilderness will be reviewed with regard to the Refuge purposes, the Wilderness Act, and other applicable legislative and administrative provisions and are subject to a minimum requirements analysis.

Arctic Refuge is composed of five terrestrial ecoregions and freshwater, marine, and estuarine aquatic habitats. Research may occur in all of these areas. Research has been and will continue to be a common activity. Research activities would occur at all times of the year but mostly in the spring, summer, and/or fall. A partial list of research categories includes biology, ecology, botany, geology, climatology, glaciology, paleontology, archeology, paleoecology, sociology, oceanography, hydrology, space physics, geophysics, and anthropology.

Research may employ a wide spectrum of methods from many disciplines of science. Lethal sampling may be needed in some studies where it furthers the purposes of the Refuge, is integral to the study methods, and no reasonable alternative exists. Studies that involve invasive procedures or that harm or materially alter the behavior of the animal under study must be in compliance with the Animal Welfare Act and, as appropriate, approved by an Institutional Animal Care and Use Committee prior to implementing field work.

Equipment for sampling may include hand powered and motorized instruments (tools). Researchers would be expected to submit investigation plans or proposals, annual activity reports, and copies of publications resulting from the research. Researchers would be required to minimize effects on other users of Refuge lands. They would also be encouraged to contact neighboring communities to discuss proposed and completed projects.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage research activities at current levels. Administrative staff time primarily involves phone conversations, written correspondence, proposal review, permit issuance, field monitoring of special use permit compliance with permit conditions, and other professional interactions with researchers. Equipment and facilities are in place to administer this program at current levels. The Refuge's administrative oversight of the activity and comprehensive State and Federal regulations continually evolve to respond to management needs. Compliance with regulations and permit conditions will be routinely checked by Refuge staff. Refuge law enforcement personnel will also help minimize direct impacts from scientific research by enforcing compliance with special use conditions.

Equipment might include aircraft, trucks, boats, and snowmobiles used in monitoring compliance of special use permits. Facilities include offices, workshops, administrative cabins, fuel storage, and administrative housing. Researchers submit investigation plans, which are evaluated for compatibility with Refuge purposes. Access issues are examined similarly. Special use permits are written with stipulations called "Special Conditions" to ensure compatibility.

When requested, the permit holder would provide logistical support for site visits by Refuge staff for purposes of monitoring permit compliance. Logistical support may include transportation from Fairbanks or a community adjacent to the Refuge. An administrative fee is charged to private companies and for-profit organizations seeking to do research or data collection on the Refuge. This fee is waived for research associated with public agencies and educational institutions.

Anticipated Impacts of Use(s): The Refuge manager would ensure that short-term impacts would be minimized through special conditions incorporated in each special use permit. Factors such as project purpose, data collection methods, number of researchers, transportation, aircraft use, fuel storage, garbage and/or human waste management, project duration, type and location of lodging, and location of access points would determine the extent of effects on the Refuge. Potential short-term effects on other Refuge visitors include exposure to sights and sounds that diminish the wilderness experience for which the Refuge is renowned. Minor disruption of animal movements may occur. Some animals, plants, or other objects of natural history may be collected when justified. Potential cumulative effects on Refuge resources and visitors will be evaluated annually. Management action would be taken to avoid cumulative effects through public dialogue, development and enforcement of permit conditions, and denial of permits. The Refuge manager will exercise his or her authority as necessary to stop, terminate, amend, or establish new permit conditions if research activities are found to have unanticipated detrimental effects on Refuge resources, authorized public use, or the health and safety of the public. A new compatibility determination would be required if research activities have unacceptable effects on Refuge purposes or resources.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: A special use permit with the following stipulations is required for scientific research. These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

1. Failure to abide by any part of this special use permit; violation of any refuge related provision in Titles 43 (Part 36) or 50(sub-chapters B and C), Code of Federal Regulations; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., research assistants). Appeals of decisions relative to permits are handled in accordance with Title 50 Code of Federal Regulations Part 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of the permit.
3. A copy of this permit must be in the permittee's or field party chief's possession at all times while exercising the privileges of the permit.
4. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
5. The permittee must notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of annual activities allowed by this permit.
6. Prior to beginning any activities allowed by this permit, the permittee must provide the refuge manager with: (1) the name(s) and method of contact for the lead field guide(s); (2) aircraft and other vehicle types to be used and identification information for these vehicles; (3) names of assistant guides and helpers; and (4) any changes in information provided in the original permit application.
7. The Refuge Manager or designee, upon request, shall be afforded the opportunity and logistical support from the nearest commercial transportation site to accompany the permittee for the purpose of inspection and monitoring permittee activities. A final inspection trip provided by the permittee of the areas of use may be required by the Refuge Manager to determine compliance with the terms of this permit.
8. An annual report of activities conducted on the refuge shall be provided to the Refuge Manager within 30-days of the permit expiration (normally 1-2 pages). Copies of all

final reports will be forwarded to the Refuge Manager. If helicopters are used, the activity report must include a detailed summary of activities for inclusion in the Refuge helicopter landing database. The summary must include:

- a. aircraft model
 - b. operator company or ownership,
 - c. Arctic Refuge-issued Special Use Permit number of operator,
 - d. date and time of flights,
 - e. number of hours flown,
 - f. landing locations with GPS coordinates in decimal degrees,
 - g. date and time of each landing.
9. This permit authorizes use only on Arctic National Wildlife Refuge lands. Use of land selected by or conveyed to the State of Alaska or North Slope Borough; or a Native corporation or individual is not authorized by this permit.
 10. The permittee and permittee's employees, coworkers, or contractors do not have the exclusive use of the site(s) or lands covered by this permit.
 11. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near subsistence hunters, and damage to cabins, trails, traditional campsites, or caches used by subsistence users.
 12. Any action by a permittee or the permittee's employees which unduly interferes with or harasses other refuge visitors or impedes access to any site is strictly prohibited. Examples of prohibited acts include, but are not limited to, low flights over camps or persons at less than 500 feet (unless landing) and parking aircraft or placing other objects (rocks, tents, etc.) on any landable area so as to restrict use by other aircraft or persons.
 13. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
 14. The operation of aircraft resulting in herding, harassment, hazing, or driving of wildlife is prohibited except to accomplish the authorized research. It is recommended that all aircraft, except for take-off and landing, and as necessary for safety, shall maintain a minimum altitude of 2000 feet above ground level (AGL).
 15. Helicopter use may be authorized in some instances. Those authorized with helicopter access must comply with the following:

- a. Landing is prohibited except for the direct support of the activity covered by this permit and emergencies. No recreational use of helicopters is permitted. The following site is authorized: (name and site coordinates)
 - b. Overnight stays must be authorized.
 - c. Personnel transported are restricted to only those necessary to accomplish the authorized activity.
16. Unauthorized caches of fuel or other supplies are prohibited. Fuel storage, if any, will be as outlined in the operations plan, preapproved by the manager, and in compliance with regional Service fuel storage policy.
17. The construction of landing strips or pads is prohibited. Incidental hand removal of rocks and other minor obstructions may be permitted.
18. Snowmobiles, dog teams, watercraft, and other means of transportation shall be operated in such a manner as to prevent the herding, harassment, hazing, or driving of wildlife for viewing or other purposes.
19. The use of off-road vehicles (except snow machines with adequate snow cover) is prohibited. The use of snowmobiles, dog teams, and other means of surface transportation may only be used when adequate snow cover is present and in such a manner as to prevent waste or damage to the Refuge. The phrase "adequate snow cover" means snow is of a depth to protect the underlying vegetation and soil.
20. Any human-wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the refuge manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the refuge manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident Report form (Service 2008). Animals taken in defense of life or property must be reported to the refuge manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.
21. Use of fuel stoves is encouraged over use of wood for cooking and heating. Only dead and down wood may be used for fires and other purposes. Live and standing dead wood must not be altered or used in a way that causes damage to them.
22. In general and where possible, camps must be located on durable surfaces (snow, sand or gravel). Camps located on vegetation must be relocated at intervals adequate to prevent site impacts. Sites at popular aircraft access points that are already heavily impacted can continue to be used. Along high use rivers and lakes, camps must not be located on vegetated sites that show human caused scuffing or matting of vegetation.
23. Construction of cabins, platforms, or other permanent structures is prohibited. Wall tents with floors that are completely removed from the refuge at the end of field season are allowed.
24. No discharge of petroleum products or toxic materials shall be made within the refuge. All hazardous substance utilized and/or generated by permitted activity shall be contained, controlled and cleaned up. Such measures shall take precedence over all

other matters except human safety. All spills or leakage of petroleum products or toxic materials, fires, fatalities, and any other conditions which threaten the refuge's resources, the environment or human safety, shall be reported by the permittee to the refuge manager immediately or as soon as communication can be established.

25. Permittees shall maintain their use areas in a neat and sanitary condition. All garbage, litter, and debris must be removed from the refuge. Food, garbage, and other materials must be stored to minimize attraction to bears and other wildlife. All evidence of your camp must be obliterated prior to your departure from the site. Equipment and other property must be removed from the refuge upon completion of the permitted activities.
26. Human waste must not be left less than 200 feet from springs, lakes, and streams. Bury waste under soil (or under snow at the ground level during periods when the ground is frozen). Paper toilet tissue, if used, must be packed out or burned completely to ash. Moist towelettes or sanitary products must be removed as trash.
27. The preeminent value of the Arctic Refuge lies in its wilderness character. The permit holder shall ensure that all employees and clients seek to minimize the effect of their activities on the wilderness character of the land, wildlife, and the unique experience available here.

All permitted activities that occur within 25 miles of the Beaufort Sea coastline will have the following additional condition:

- The permittee must read the Polar Bear Interaction Guidelines (Guidelines) (Arctic Refuge 2010) to these permit Special Conditions. The Guidelines must also be distributed to all employees and clients of the permittee before engaging in any activities on the Refuge. In addition, the following conditions shall be met:
 - Protection of den sites and minimizing disturbance to sows with small cubs is of critical importance. Guides operating under this permit must become knowledgeable of the signs and behaviors indicating the presence of a den and avoid those areas. No person shall approach, or remain, within 1 mile of a polar bear den, or of a sow with small cubs. If at any time the permittee becomes aware of signs indicating their close proximity to a polar bear den, or encounters a sow with small cubs, all members of the guided party must immediately retreat to a distance of at least one mile. If, at any time, the location of a den becomes known to the permittee, no approach shall be made closer than one mile. When operating within 25 miles of the Beaufort Sea coastline, the permittee will store attractants (human food, dog food, garbage, etc.) in "bear-resistant" containers to minimize attracting polar bears and avoid conditioning bears to human food. Containers must be approved as "bear-resistant." Information about certified "bear resistant" containers can be found at http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf
 - Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are

also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.

- Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.

Justification: Section 101 of ANILCA states, in part, the intent of Congress to maintain opportunities for scientific research on conservation system units, including national wildlife refuges. The U. S. Fish and Wildlife Service (Service) supports research as described in the Refuge Manual (4 RM 6.1), which states:

“Natural and social science information is necessary for the proper management of the National Wildlife Refuge System. It is the policy of the Service to encourage and support research and management studies in order to provide scientific data upon which decisions regarding management of units of the refuge system may be based. The Service will also permit the use of a refuge for other investigatory scientific purposes when such use is compatible with the objectives for which the refuge is managed. Priority will be given to studies that contribute to the enhancement, protection, use, preservation, and management of native wildlife populations and their habitats in their natural diversity.”

The refuge manager also may permit the use of a refuge for other investigatory purposes when such use is compatible with the purposes for which the refuge is managed. Priority will be given to studies that contribute to the enhancement, protection, use, conservation, and management of native wildlife populations and their habitats in their natural diversity. All proposed research conducted by other agencies or entities will be thoroughly evaluated prior to authorization and then monitored closely to ensure that the activities do not materially interfere with or detract from the purposes of the refuge or the mission of the Refuge System.

Scientific investigations of wildlife, resources, and social interactions will support the Refuge’s ability to provide for wildlife-dependent priority public uses and to meet other Refuge purposes. These investigations must be conducted safely. After fully considering the impacts of this activity, as described previously in the “Anticipated Impacts of the Use” section of this document, it is my determination that scientific research activities in the Refuge do not materially interfere with or detract from the purposes of the Refuge or the mission of the Refuge System.

Supporting Documents:

- Arctic National Wildlife Refuge. 2010. Polar bear interaction guidelines. U.S. Fish and Wildlife Service, Fairbanks, Alaska. Unpublished. 3pp.
- Interagency Grizzly Bear Committee. IBG Certified bear resistant products webpage. http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf, Accessed 11 Feb 2011.
- U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.
- U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.
- U.S. Fish and Wildlife Service. 2008. Region 7: Bear awareness and firearms safety training policy, Appendix F. U.S. Fish and Wildlife Service. Anchorage, Alaska. Unpublished. 36 pp.

Refuge Determination:

Refuge Manager/

Project Leader Approval

(Signature)

Date

Concurrence:

Regional Chief

National Wildlife

Refuge System

(Signature)

Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

 X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Subsistence Harvest of House Logs

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): Subsistence log cutting was originally found to be compatible in the Refuge's 1988 Comprehensive Conservation Plan and was again determined to be compatible in 1994. Associated uses include hunting, fishing, trapping, firewood gathering, berry picking, and gathering of other plant materials while harvesting trees for house building. These uses also include motorboat access and other means of surface transportation traditionally employed for such subsistence purposes, as allowed under ANILCA section 811.

According to 50 CFR, 36.15, "Notwithstanding any other provision of this part, the cutting of live standing timber by local rural residents for appropriate subsistence uses, such as firewood or house logs, may be permitted in Alaska National Wildlife Refuges as follows: For live standing timber greater than six inches diameter at breast height (4 ½ feet above ground level), the refuge manager may allow cutting in accordance with the specifications of a special use permit if such cutting is determined to be compatible with the purposes for which the refuge was established." In addition, 50 CFR 36.15 indicates that a special use permit is not needed to harvest fewer than 20 trees of live standing timber between three and six inches diameter at breast height (dbh). Harvest of over 20 trees between three and six inches dbh would need a special use permit and would be subject to the same stipulations as other timber harvest permits.

Residents of communities near the Refuge boundary have lifestyles and economies that depend on subsistence resources. Subsistence activities described here focus primarily on the cutting of timber for house logs and/or firewood greater than six inches dbh or requests for greater than 20 trees between three and six inches dbh. Cutting of timber has primarily been used to build, replace, or repair subsistence or trapping cabins on the Refuge or in the nearby communities. Only recently have we received requests for timber harvests to supply firewood to local residences in Arctic Village. We expect these requests to increase because rising fuel prices will compel some residents to utilize local timber as a heating source to augment the use of heating fuel. For house logs and firewood timber harvests, requests have been between 40 and 100 trees. Permit stipulations require permittees to utilize as much of the harvested tree as possible. Each permit application is evaluated on its own merits prior to approval.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage subsistence house log harvest activities at existing and projected levels. Management primarily includes surveys conducted specifically for the management of house logs and firewood collecting. Surveys will be conducted from the air and from motorboats and will be used to determine where adequate stands of large white spruce occur and how many

trees can be removed while allowing sustainability of riparian spruce stands. It is anticipated that management of these permits will require no longer than one week of staff time annually.

Anticipated Impacts of Use(s): White spruce is the favored timber species for logging. It occurs throughout central Alaska on well-drained floodplain soils, uplands, and south facing slopes where seasonal thaw of soils is deep. Most white spruce stands in floodplains and on uplands consist of trees 40–50 feet tall and 8–16 inches in diameter. Harvest of white spruce would probably occur only in areas accessible to village communities. The nearest study aimed at examining sustainability of white spruce logging was about 390 miles southwest on Nowitna National Wildlife Refuge, where Lambrecht (2004) estimated a sustainable harvest of one house log per 2.5 acres per year in ideal riparian white spruce habitat on islands along the Yukon River. Any tree harvest on the Refuge will be based on sustainability recommendations adopted from Koyukuk and Nowitna Refuges and regulated by permit special conditions. If cutting requests increase substantially above current low levels, Refuge staff will need to re-evaluate the adopted harvest recommendations to ensure they are sustainable.

Impacts to habitat caused by supporting boats, snowmobiles, and foot travel are generally believed to be minimal. Much of the access by subsistence users is by boat (spring and summer) or snowmobile (winter) during adequate snow cover. Temporary displacement and/or disturbance to wildlife can occur, but impacts would likely be short-term and minimal. Impacts to the wilderness character of the Refuge will be minimized through special conditions limiting the number of trees that can be taken within 50 feet of riverbanks. The introduction of invasive plant species, perhaps from seeds carried on boats, snowmobiles, or dog sleds, could affect Refuge resources, although it is not known to have occurred on the Refuge to date. Logging sites may be vulnerable to establishment of non-native weeds if bare soil is exposed. This is not likely during selective logging of a few trees per acre. If a large-scale timber cutting project is conducted on the Refuge, then Refuge staff will survey the site for non-native plants the following summer.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility:

A special use permit with the following stipulations is required for subsistence harvest of house logs or firewood greater than 6 inches (DBH) or exceeding 20 trees between 3 and 6 inches (DBH). These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

1. Failure to abide by any part of this special use permit; violation of any refuge related provision in Titles 43 (Part 36) or 50(sub-chapters B and C), Code of Federal Regulations; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., research assistants). Appeals of decisions relative to permits are handled in accordance with Title 50 Code of Federal Regulations Part 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of the permit.
3. A copy of this permit must be in the permittee's or field party chief's possession at all times while exercising the privileges of the permit.
4. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
5. The permittee must notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of annual activities allowed by this permit.
6. Prior to beginning any activities allowed by this permit, the permittee must provide the refuge manager with: (1) the name(s) and method of contact for the lead field guide(s); (2) aircraft and other vehicle types to be used and identification information for these vehicles; (3) names of assistant guides and helpers; and (4) any changes in information provided in the original permit application.
7. The Refuge Manager or designee, upon request, shall be afforded the opportunity and logistical support from the nearest commercial transportation site to accompany the permittee for the purpose of inspection and monitoring permittee activities. A final inspection trip provided by the permittee of the areas of use may be required by the Refuge Manager to determine compliance with the terms of this permit.
8. This permit authorizes use only on Arctic National Wildlife Refuge lands. Use of land selected by or conveyed to the State of Alaska or North Slope Borough; or a Native corporation or an individual is not authorized by this permit.
9. The permittee and permittee's employees, coworkers, or contractors do not have the exclusive use of the site(s) or lands covered by this permit.
10. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near subsistence hunters, and damage to cabins, trails, traditional campsites, or caches used by subsistence users.
11. Any action by a permittee or the permittee's employees which unduly interferes with or harasses other refuge visitors or impedes access to any site is strictly prohibited. Examples of prohibited acts include, but are not limited to, low flights over camps or persons at less than 500 feet (unless landing) and parking aircraft or placing other

- objects (rocks, tents, etc.) on any landable area so as to restrict use by other aircraft or persons.
12. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
 13. The permittee shall provide the Refuge Manager with a report including the number of trees harvested, estimate of size (length and diameter) of logs, and which area(s) logs were harvested under this permit within 30 days of permit expiration.
 14. Collection of logs is limited to permitted area.
 15. The permit authorizes the harvest of logs only for permittee's personal use for construction of subsistence cabins, houses or for firewood. Harvest of logs for commercial use is prohibited.
 16. The permittee is not authorized to clear cut or group harvest an area, and is required to follow selective cutting procedures when harvesting trees (e.g. after harvesting one tree the next tree harvested must be a minimum of 100 feet away from a previously cut tree). No cutting of timber may be done within 50 feet of a stream, lake, or river and no more than one tree in five (20%) may be cut in any specific stand.
 17. The permittee is required to lop and scatter all slash (i.e. all branches must be cut off the bole, with the remaining bole cut every four feet). Cut limbs may not be concentrated on the site, all tree harvest debris must be scattered to avoid fuel accumulations and eliminate potential spruce bark beetle habitat.
 18. The permittee is required to utilize as much of the harvested tree as possible.
 19. The operation of aircraft resulting in herding, harassment, hazing, or driving of wildlife is prohibited except to accomplish the authorized research. It is recommended that all aircraft, except for take-off and landing, and as necessary for safety, shall maintain a minimum altitude of 2000 feet above ground level (AGL).
 20. Unauthorized caches of fuel or other supplies are prohibited. Fuel storage, if any, will be as outlined in the operations plan, preapproved by the manager, and in compliance with regional Service fuel storage policy.
 21. The construction of landing strips or pads is prohibited. Incidental hand removal of rocks and other minor obstructions may be permitted.
 22. Snowmobiles, dog teams, watercraft, and other means of transportation shall be operated in such a manner as to prevent the herding, harassment, hazing, or driving of wildlife for viewing or other purposes.
 23. The use of off-road vehicles (except snow machines with adequate snow cover) is prohibited. The use of snowmobiles, dog teams, and other means of surface transportation may only be used when adequate snow cover is present and in such a manner as to prevent waste or damage to the Refuge. The phrase "adequate snow cover" means snow is of a depth to protect the underlying vegetation and soil.

24. Any human-wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the refuge manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the refuge manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident Report form (Service 2008). Animals taken in defense of life or property must be reported to the refuge manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.
25. Construction of cabins, platforms, or other permanent structures is prohibited. Wall tents with floors that are completely removed from the refuge at the end of field season are allowed.
26. Permittees shall maintain their use areas in a neat and sanitary condition. All garbage, litter, and debris must be removed from the refuge. Food, garbage, and other materials must be stored to minimize attraction to bears and other wildlife. All evidence of your camp must be obliterated prior to your departure from the site. Equipment and other property must be removed from the refuge upon completion of the permitted activities.
27. Human waste must not be left less than 200 feet from springs, lakes, and streams. Bury waste under soil (or under snow at the ground level during periods when the ground is frozen). Paper toilet tissue, if used, must be packed out or burned completely to ash. Moist towelettes or sanitary products must be removed as trash.
28. The preeminent value of the Arctic Refuge lies in its wilderness character. The permit holder shall ensure that all employees and clients seek to minimize the effect of their activities on the wilderness character of the land, wildlife, and the unique experience available here.

Justification: The definition of “subsistence uses” found in Section 803 of ANILCA includes the use of logs for the construction of shelter (i.e., homes), and U.S. Fish and Wildlife Service (Service) regulations at 50 CFR 36.15 allow this use on Alaska refuges. These regulations specify that a Refuge permit is required to cut trees greater than six inches in diameter (dbh) or for harvest of more than 20 trees between three and six inches (dbh). Residents of the nearby village communities have lifestyles and economies that depend on subsistence resources. Manufactured building materials are not available at a reasonable cost to these subsistence users. After fully considering the impacts of this activity, as described previously in the “Anticipated Impacts of the Use” section of this document, it is my determination that this subsistence activity in the refuge does not materially interfere with or detract from the purposes of the refuge or the mission of the Refuge System.

Supporting Documents:

Lambrecht, R. 2004. Forest Inventory - Nowitna NWR Islands. Unpubl. report in files, U.S. Fish and Wildlife Service. Galena, Alaska. 4pp.

U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.

U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.

Refuge Determination:

Refuge Manager/

Project Leader Approval

(Signature)

Date

Concurrence:

Regional Chief

National Wildlife

Refuge System

(Signature)

Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Subsistence Activities

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This is a re-evaluation of the compatibility of subsistence uses of Federal lands in Arctic National Wildlife Refuge. Subsistence was originally found to be a compatible use during the development of the Refuge's Comprehensive Conservation Plan in 1988. Subsistence was again determined to be compatible, subject to reasonable regulation, in 1994. Subsistence activities addressed in this determination include hunting, fishing, trapping, firewood gathering, berry picking, and gathering of other plant materials. The subsistence use of house logs is addressed in a separate compatibility determination.

These activities are supported by various methods of access on the entire Refuge, though certain areas have traditionally been used more frequently. Snowmobiles and motorboats are the primary means of surface transportation traditionally employed for such purposes, as allowed under ANILCA Section 811 and refuge regulations (50 CFR 36). Subsistence has also been historically supported by the occasional use of airplanes for access to remote locations surrounding some communities.

Hunting and fishing occur during various periods of the year. Berry picking occurs in late summer and early fall, and trapping occurs during the winter and spring. Firewood collection occurs throughout the winter and spring.

Rural residents conduct subsistence activities as authorized by State and Federal regulations. Consumptive uses of fish and game are generally regulated by State regulations (5AAC) or Federal subsistence regulations (50 CFR Part 100). Gathering of plant materials, including firewood, on the Refuge, is regulated by 50 CFR Part 36.

Residents of rural communities located in or near the Refuge have lifestyles and economies that depend on subsistence resources, including resources in the Refuge. Subsistence activities are not just a way of obtaining food; they are an important mechanism for maintaining cultural values such as kinship, community, respect for elders, hospitality, sharing resources, and the passing of values to younger generations. In addition, many residents in the area simply prefer the taste of traditional wild foods to that of commercially purchased foods. Mainstay subsistence foods for these residents are fish, whales, moose, and caribou (Jacobson and Wentworth 1982; Arctic Borderlands Ecological Knowledge Society 2009). Waterfowl; black, grizzly and polar bears; and small game, including grouse snowshoe hare, beaver, and furbearers, are at times important to local residents for food, fur, and traditional crafts. Berries and other plant materials such as firewood, house logs, and birch bark are also frequently gathered (Wolfe et al. 2001). A detailed description of subsistence uses and harvest can also be found in the Refuge Comprehensive Conservation Plan.

Trappers operate in the Refuge, harvesting marten, lynx, fox, wolves, beaver, river otter, and other small furbearers. The sale of these furs provides supplemental income to residents depending on a subsistence lifestyle. Trapping is considered a subsistence activity when practiced by qualified subsistence users. The compatibility of non-subsistence trapping as a Refuge use is considered under a separate compatibility determination.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage subsistence activities at existing and projected levels. Management primarily includes the inventory and monitoring of fish and wildlife subsistence species; surveys of public use and subsistence harvest in local communities; environmental education, such as steel shot clinics or other efforts aimed at improving public understanding of major conservation issues; and law enforcement patrols. During such patrols, Refuge staff members opportunistically conduct outreach to increase subsistence user awareness of the status of local fish and wildlife populations, the relationship of regulations to sustainable yield, and the importance of knowing land ownership and regulatory boundaries where subsistence activities take place. Refuge staff members spend considerable time participating in and supporting the regulatory development process with the Federal Subsistence Board and the Alaska Boards of Fish and Game to ensure that harvest levels are sustainable. Oversight of this activity will not result in an increase of costs for the Refuge staff to administer or manage.

Anticipated Impacts of Use(s): Fish and wildlife harvested by subsistence users at current and projected levels—in accordance with established State and Federal regulations pertaining to season, bag limits, and methods of harvest—are not expected to have long-term impacts on the overall populations of fish and wildlife resources in the Refuge. State and Federal biologists monitor fish and game populations, and State and Federal regulatory bodies continually respond to management needs by adopting regulations to ensure the continued health of fish and wildlife populations. The combination of Alaska State hunting regulations (5AAC) and the Federal Subsistence Regulations (50 CFR Part 100) are intended to provide a sustainable harvest over the long term. It is possible that localized or short-term population reductions may occur due to unanticipated changes in physical condition of animals, environmental conditions, distribution, predation, and harvest pressure.

Refuge staff will continue to monitor populations to avoid depletion of subsistence resources by overharvesting, and to monitor subsistence harvest levels through surveys. Impacts to the resources from berry picking, firewood gathering, and other plant harvesting activities, at low intensity, are relatively insignificant. Impacts to habitat caused by aircraft, boats, and foot travel are generally minimal. Much of the access by subsistence users is by boat or snowmobile (in winter during adequate snow cover). Refuge staff members have observed that, to date, these activities have caused very little impact to habitats. The introduction of invasive plant species, perhaps from seeds carried on boats, snowmobiles, or dog mushing equipment, could affect Refuge resources, although it is not known to have occurred yet. The U.S. Fish and Wildlife Service (Service) will continue monitor such introductions.

Refuge staff will monitor subsistence use levels to determine if changes in conditions or intensity have the potential to affect Refuge resources. If snowmobile or motorboat use on the Refuge were to increase substantially, disturbance to important subsistence species (including moose and caribou) could occur (McTaggart-Cowan 1981; Creel et al. 2002). Denning bears are

most susceptible to snowmobile disturbance. Ill-advised or uninformed snowmobile use could cause bears to abandon dens and harm newborn cubs incapable of travel (Jonkel 1980). Noise disturbance could also affect moose and caribou energy budgets, reproductive success, and long-term survival (Calef et al. 1976; Olliff et al. 1999). Snowmobile use is only allowed during periods of adequate snow cover, and the Refuge manager has authority to announce when conditions are or are not adequate for snowmobile use on the Refuge based on resource conditions per 43 CFR 36.11. Refuge staff will monitor use levels to determine if intensity in this area has the potential to affect Refuge resources.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: Special use permits are not required for these non-wildlife-dependent recreational activities, so there are no associated stipulations. However, visitors will be required to comply with existing State and Federal subsistence regulations. The Refuge provides information on Leave No Trace principles and other means to minimize impacts to Refuge resources.

Justification: One of the purposes of the Refuge is to provide opportunities for continued subsistence uses by local residents, consistent with the other Refuge purposes. ANILCA recognized that the continued opportunity for subsistence uses of public lands is critical to the physical, economic, traditional, social, and cultural existence of rural residents of Alaska. ANILCA established a preference for subsistence users, stating that the taking of fish and wildlife on public lands for non-wasteful subsistence use is given priority over other consumptive uses. In times of scarcity, recreational use is limited first. Section 811 of ANILCA ensures that subsistence users can access public lands by snowmobile, motorboat, and other traditionally used means of surface transportation, subject to reasonable regulation. After fully considering the impacts of this activity, as described previously in the "Anticipated Impacts" section of this document, it is my determination that subsistence activities in the Refuge will not materially interfere with or detract from the purposes of the Refuge, including Wilderness Act purposes for the Refuge wilderness area and fulfillment of the Refuge System mission.

Supporting Documents:

- Arctic Borderlands Ecological Knowledge Society. 2009. Arctic Borderlands Ecological Knowledge Co-op Community Reports 2008-2009. Whitehorse, Yukon. 57pp.
- Calef, G.W., E.A. DeBock, and G.M. Lortie. 1976. The reaction of barren-ground caribou to aircraft. *Arctic* 29(4):201-212.
- Creel, S., J.E. Fox, A. Hardy, J. Sands, B. Garrott, and R.O. Peterson. 2002. Snowmachine activity and glucocorticoid stress responses in wolves and elk. *Conservation Biology* 16:809-814.
- Jacobson, M.J. and C. Wentworth. 1982. Kaktovik Subsistence: Land use values through time in the Arctic National Wildlife Refuge area. U.S. Fish and Wildlife Service. Fairbanks, Alaska. 142 pp.
- Jonkel, C. J. 1980. Black, brown, and polar bears. Pages 227–228 *in* Big game of North America: ecology and management. J. L. Schmidt and D.L. Gilbert, *eds.* Harrisburg, Pennsylvania: Stackpole Books.
- McTaggart-Cowan, I. 1981. Wildlife conservation issues in northern Canada. Canadian Environmental Advisory Council report, no. 11. University of Calgary, Canada.
- Olliff, T., K. Legg, and B. Kaeding, editors. 1999. Effects of winter recreation on wildlife of the Greater Yellowstone Area: a literature review and assessment. Report to the Greater Yellowstone Coordinating Committee. Yellowstone National Park, Wyoming. 315 pages.
- U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.
- U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.
- Wolfe, R.J., S. Pedersen, C. Scott, and R.A. Caulfield. 2001. Subsistence Economies and Oil Development: Case Studies from Nuiqsut and Kaktovik, Alaska and Subsistence Harvest Variability in Alaska Native Communities. Alaska Department of Fish and Game. Fairbanks, Alaska. 37 pp.

Refuge Determination:

Refuge Manager/

Project Leader Approval _____
(Signature) Date

Concurrence:

Regional Chief

National Wildlife

Refuge System _____
(Signature) Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

_____ Categorical Exclusion without Environmental Action Memorandum

_____ Categorical Exclusion and Environmental Action Memorandum

_____ Environmental Assessment and Finding of No Significant Impact

X Environmental Impact Statement and Record of Decision

DRAFT COMPATIBILITY DETERMINATION

Use: Waste Cleanup and Site Remediation

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of the American people in a way that will leave these areas unimpaired for future use and

enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): The Department of Defense established several Distant Early Warning stations in the 1950s in the area that later became Arctic Refuge. These sites were maintained for years until being abandoned. In recent years, the U.S. Army Corps of Engineers has begun planning for and/or actual removal of debris and contaminant wastes from these sites. Investigation and removal activities are authorized with a special use permit, and special conditions are devised to avoid impacts to Refuge resources and disruption to subsistence users and visitors. These activities can involve the use of helicopter landings, generators, barges, staging equipment, and tracked vehicles to facilitate the excavation, remediation, and removal of waste. The use of excavation equipment can be authorized for sites adjacent to the coast, but travel on land is severely restricted to the immediate area of excavation and removal, while travel across land is not authorized. Large equipment could be limited to winter activities only. Excavations range from less than one-cubic-meter removal by hand tools to 35-cubic-meter removals by larger equipment. Excavated sites are backfilled per Alaska Department of Environmental Conservation (ADEC) requirements and naturalized by removing mounded soil or debris deposited around the site and smoothing jagged edges of the site. Actions may occur at any time of the year depending on the desired outcome and logistical needs. These activities are overseen by the U.S. Fish and Wildlife Service (Service) and ADEC.

All activities within 25 miles of the coast require Marine Mammal Protection Act (MMPA) and/or Section 7 Endangered Species Act (ESA) consultation to ensure that activities do not adversely affect polar bears, other threatened or endangered species, and/or their critical habitats. Cleanup activities in designated wilderness are subject to Minimum Requirements Analysis.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage activities at existing and projected levels. Administrative staff time (as many as 20 staff days per year) primarily involves phone conversations, written correspondence, formal or informal consultations with outside Service personnel, and personal interaction with permittees regarding ongoing activities. Field work associated with administering the program primarily involves monitoring (when applicable) activities to ensure all activities remain compatible.

Anticipated Impacts of Use(s): We anticipate moderate, short-term impacts to fish and wildlife resources, other Refuge resources, or other Refuge users, mainly due to increased

human activity during cleanup operations. The Refuge's administrative oversight of the activity and comprehensive State and Federal regulations continually evolve to respond to management needs. Compliance with regulations and permit conditions will be routinely checked by Refuge staff. Refuge law enforcement personnel will also help minimize direct impacts from recreational guide services by enforcing compliance with special use conditions. Consultation under Section 7 of the ESA and MMPA ensure that polar bear and polar bear critical habitat is not adversely affected by placing stipulations upon the permittee to avoid polar bear denning habitat, reduce the potential for interactions, and minimize impacts when interactions occur. ESA consultations are also initiated for other endangered or threatened species that occur on the Refuge.

Habitat impacts associated with access will be minimal and transitory because access would mainly be by barge, aircraft landing on a previous military landing strip, or sea ice. Operations on vegetated lowland tundra and disturbance to vegetation would be localized and limited under the stipulations of the special use permit. Excavation activities will have moderate, long-term, site-specific impacts on vegetation and soil at the excavation site. Winter operations would likely have less impact to surrounding soils and vegetation because activity would occur on frozen ground, covered with a layer of protective snow. The introduction of invasive species could affect Refuge resources, although it is not known to have occurred by this activity in the Refuge to date. Refuge staff will survey the site for non-native plants the year after project completion. Temporary displacement and/or disturbance to wildlife can occur. Impacts would likely be minimal and transitory. Impacts to endangered or threatened species would also likely be minimal and transitory because of preventative measures put in place by permit conditions and ESA and/or MMPA consultations.

Additional impacts will have positive effects on Refuge resources, wildlife, and Refuge users. Considerable amounts of contaminated soil, debris, and substrates will be removed, thus reducing overall contamination of the site(s) and contamination spread from the site(s). Surface exposure to contaminated soil or debris will be eliminated or reduced, lessening the probability that humans and animals will contact hazardous material. Aesthetic appearance and wilderness values will be increased by the removal of contaminated debris, such as fuel drums found above ground.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: A special use permit with the following stipulations is required for waste cleanup and site remediation. These stipulations are intended to minimize impacts and ensure compatibility. Refuge permits may also include other special conditions as necessary or appropriate for the specific operations or activities

that are proposed. These stipulations will be updated periodically to reflect management needs or policy changes.

1. Failure to abide by any part of this special use permit; violation of any refuge related provision in Titles 43 (Part 36) or 50(sub-chapters B and C), Code of Federal Regulations; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for revocation of this permit and could result in denial of future permit requests for lands administered by the U.S. Fish and Wildlife Service. This provision applies to all persons working under the authority of this permit (e.g., research assistants). Appeals of decisions relative to permits are handled in accordance with Title 50 Code of Federal Regulations Part 36.41.
2. The permittee is responsible for ensuring that all employees, party members, aircraft pilots, and any other persons working for the permittee and conducting activities allowed by this permit are familiar with and adhere to the conditions of the permit.
3. A copy of this permit must be in the permittee's or field party chief's possession at all times while exercising the privileges of the permit.
4. This permit may be cancelled or revised at any time by the refuge manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems, etc.).
5. The permittee must notify the refuge manager during refuge working hours in person or by telephone before beginning and upon completion of annual activities allowed by this permit.
6. Prior to beginning any activities allowed by this permit, the permittee must provide the refuge manager with: (1) the name(s) and method of contact for the lead field guide(s); (2) aircraft and other vehicle types to be used and identification information for these vehicles; (3) names of assistant guides and helpers; and (4) any changes in information provided in the original permit application.
7. The Refuge Manager or designee, upon request, shall be afforded the opportunity and logistical support from the nearest commercial transportation site to accompany the permittee for the purpose of inspection and monitoring permittee activities. A final inspection trip provided by the permittee of the areas of use may be required by the Refuge Manager to determine compliance with the terms of this permit.
8. This permit authorizes use only on Arctic National Wildlife Refuge lands. Use of land selected by or conveyed to the State of Alaska or North Slope Borough; or a Native corporation or an individual is not authorized by this permit.
9. The permittee and permittee's employees, coworkers, or contractors do not have the exclusive use of the site(s) or lands covered by this permit.
10. An annual report of activities conducted on the refuge shall be provided to the refuge manager within 30-days of the permit expiration (normally 1-2 pages). Copies of all final reports will be forwarded to the refuge manager. If helicopters are used, the activity report must include a detailed summary of activities for inclusion in the Refuge helicopter landing database. The summary must include:
 - a. aircraft model
 - b. operator company or ownership,

- c. Arctic Refuge-issued Special Use Permit number of operator,
 - d. date and time of flights,
 - e. number of hours flown,
 - f. landing locations with GPS coordinates in decimal degrees,
 - g. and date and time of each landing.
11. The permittee must take no action that interferes with subsistence activities of rural users or restricts the reasonable access of subsistence users to refuge lands. This may include but is not limited to disturbance of wildlife and their movements near subsistence hunters, and damage to cabins, trails, traditional campsites or caches used by subsistence users.
12. Any action by a permittee or the permittee's employees which unduly interferes with or harasses other refuge visitors or impedes access to any site is strictly prohibited. Examples of prohibited acts include, but are not limited to, low flights over camps or persons at less than 500 feet (unless landing) and parking aircraft or placing other objects (rocks, tents, etc.) on any landable area so as to restrict use by other aircraft or persons.
13. In accordance with the Archaeological Resources Protection Act (16 U.S.C. 470 ee), no person may excavate, remove, damage or otherwise alter or deface, or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless permitted or exempted (see 16 U.S.C 470cc for permit or exception guidance). No person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange any archaeological resource if such resource was excavated or removed from public lands.
14. The operation of aircraft resulting in herding, harassment, hazing, or driving of wildlife is prohibited except to accomplish authorized research. It is recommended that all aircraft, except for take-off and landing, and as necessary for safety, shall maintain a minimum altitude of 2000 feet above ground level (AGL).
15. Helicopter use may be authorized in some instances. Those authorized with helicopter access must comply with the following:
 - a. Landing is prohibited except for the direct support of the activity covered by this permit and emergencies. No recreational use of helicopters is permitted. The following site is authorized: (name and site coordinates)
 - b. Overnight stays must be authorized.
 - c. Personnel transported are restricted to only those necessary to accomplish the authorized activity.
16. Unauthorized caches of fuel or other supplies are prohibited. Fuel storage, if any, will be as outlined in the operations plan, preapproved by the manager, and in compliance with regional Service fuel storage policy.
17. All fuel containers with a storage capacity greater than 55 gallons shall be of double-wall construction. All fuel containers, including those emptied, shall be capped when not in actual use.

18. The construction of landing strips or pads is prohibited. Incidental hand removal of rocks and other minor obstructions may be permitted.
19. Snowmobiles, dog teams, watercraft, and other means of transportation shall be operated in such a manner as to prevent the herding, harassment, hazing, or driving of wildlife for viewing or other purposes.
20. The use of off-road vehicles (except snow machines with adequate snow cover) is prohibited. The use of snowmobiles, dog teams, and other means of surface transportation may only be used when adequate snow cover is present and in such a manner as to prevent waste or damage to the Refuge. The phrase "adequate snow cover" means snow is of a depth to protect the underlying vegetation and soil.
21. Crossing barrier islands or overland travel with surface vehicles on refuge lands is prohibited. Entry on refuge lands is permitted only to ensure personnel and equipment safety. Vehicle travel will cease once safety is reached. The refuge manager will be immediately notified.
22. Movement of equipment onto Refuge lands will be outlined in a work plan and preapproved by the manager. If approved, operation of removal equipment at site will be minimized to reduce damage to surrounding vegetation. Use of equipment for overland travel is not authorized.
23. Any human-wildlife interactions that have resulted in animals obtaining food; destroying property; or posing a threat to human safety; must be reported to the refuge manager immediately at (907) 456-0250, as soon as communication becomes available. You are required to submit a written report within 30 days to the refuge manager for all interactions with grizzly bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a grizzly bear, so that this data can be used to help prevent future human-bear conflicts. You may use the Bear Incident Report form (Service 2008). Animals taken in defense of life or property must be reported to the refuge manager immediately, and to the Alaska State Troopers at (907) 451-5350, and salvaged in accordance with State regulations.
24. In general and where possible, camps must be located on durable surfaces (snow, sand, gravel, or sea ice). Camps located on vegetation must be relocated at intervals adequate to prevent site impacts. Sites at popular aircraft access points that are already heavily impacted can continue to be used. Along high use rivers and lakes, camps must not be located on vegetated sites that show human caused scuffing or matting of vegetation.
25. Construction of cabins, platforms, or other permanent structures is prohibited. Wall tents with floors that are completely removed from the refuge at the end of field season are allowed.
26. Permittees shall maintain their use areas in a neat and sanitary condition. All garbage, litter, and debris must be removed from the refuge. Food, garbage, and other materials must be stored to minimize attraction to bears and other wildlife. All evidence of your camp must be obliterated prior to your departure from the site. Equipment and other property must be removed from the refuge upon completion of the permitted activities.

27. No discharge of petroleum products or toxic materials shall be made within the refuge. All hazardous substance utilized and/or generated by permitted activity shall be contained, controlled and cleaned up. Such measures shall take precedence over all other matters except human safety. All spills or leakage of petroleum products or toxic materials, fires, fatalities, and any other conditions which threaten the refuge's resources, the environment or human safety, shall be reported by the permittee to the refuge manager immediately or as soon as communication can be established.
28. For long-term basecamps, the permittee must develop and submit a human waste management plan for approval by the refuge manager. Otherwise, human waste must not be left less than 200 feet from springs, lakes, and streams. Bury waste under soil (or under snow at the ground level during periods when the ground is frozen). Paper toilet tissue, if used, must be packed out or burned completely to ash. Moist towelettes or sanitary products must be removed as trash.
29. The preeminent value of the Arctic Refuge lies in its wilderness character. The permit holder shall ensure that all employees and clients seek to minimize the effect of their activities on the wilderness character of the land, wildlife, and the unique experience available here.

All permitted activities that occur within 25 miles of the Beaufort Sea coastline will have the following additional condition:

- The permittee must read the Polar Bear Interaction Guidelines (Guidelines) (Arctic Refuge 2010) to these permit Special Conditions. The Guidelines must also be distributed to all employees and clients of the permittee before engaging in any activities on the Refuge. In addition, the following conditions shall be met:
 - Protection of den sites and minimizing disturbance to sows with small cubs is of critical importance. Guides operating under this permit must become knowledgeable of the signs and behaviors indicating the presence of a den and avoid those areas. No person shall approach, or remain, within 1 mile of a polar bear den, or of a sow with small cubs. If at any time the permittee becomes aware of signs indicating their close proximity to a polar bear den, or encounters a sow with small cubs, all members of the guided party must immediately retreat to a distance of at least one mile. If, at any time, the location of a den becomes known to the permittee, no approach shall be made closer than one mile. When operating within 25 miles of the Beaufort Sea coastline, the permittee will store attractants (human food, dog food, garbage, etc.) in "bear-resistant" containers to minimize attracting polar bears and avoid conditioning bears to human food. Containers must be approved as "bear-resistant." Information about certified "bear resistant" containers can be found at http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf
 - Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form

(Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.

- Legal take and harassment of polar bears is limited to defense of life or subsistence harvest by coastal-dwelling Native Alaskan situations only. Any killing or harassment of a polar bear in defense of life must be reported to the Refuge Manager and to the US Fish and Wildlife Service Office of Law Enforcement at (907) 456-2335 immediately, as soon as communication becomes available. You are also required to submit a completed copy of the Bear Incident Report form (Service 2008) to the Refuge Manager for all interactions with polar bears that have resulted in bears obtaining food; destroying property; posing a threat to human safety; or the death of a polar bear, so that this data can be used to help prevent future human-bear conflicts.

Justification: Cleaning up these contaminated sites supports the purposes of the Refuge and safety of Refuge staff, subsistence users, other visitors, and wildlife. The use is conducted in accordance with a Refuge special use permit with the appropriate conditions and, when applicable, guidance under ESA and/or MMPA to protect Refuge resources. After fully considering the impacts of this activity, as described previously in the “Anticipated Impacts of the Use” section of this document, it is my determination that scientific research activities in the Refuge do not materially interfere with or detract from the purposes of the Refuge or the mission of the Refuge System.

Supporting Documents:

Arctic National Wildlife Refuge. 2010. Polar bear interaction guidelines. U.S. Fish and Wildlife Service, Fairbanks, Alaska. Unpublished. 3pp.

Interagency Grizzly Bear Committee. IBG Certified bear resistant products webpage. http://www.igbconline.org/BEAR_RESISTANT_Oct2010.pdf, Accessed 11 Feb 2011.

U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.

U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.

U.S. Fish and Wildlife Service. 2008. Region 7: Bear awareness and firearms safety training policy, Appendix F. U.S. Fish and Wildlife Service. Anchorage, Alaska. Unpublished. 36 pp.

DRAFT COMPATIBILITY DETERMINATION

Use: Wildlife Observation, Wildlife Photography, Environmental Education, and Interpretation

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) was originally established as the nine-million acre Arctic National Wildlife Range by Public Land Order 2214 on December 6, 1960. On December 2, 1980, the Alaska National Interest Lands Conservation Act (ANILCA) designated eight million acres as wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge. In 1988, Public Law 100-395 added an additional 325,000 acres to the Refuge.

Refuge Purposes: Public Land Order 2214 established the original purposes of the Arctic National Wildlife Range, “For the purpose of preserving unique wildlife, wilderness and recreational values...”

The boundaries of the Arctic National Wildlife Range were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of ANILCA on December 2, 1980 (Public Law 96-487 Stat. 2371). ANILCA purposes for the Refuge include:

- i. *to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall’s sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;*
- ii. *to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats;*
- iii. *to provide, in a manner consistent with the purposes set forth in subparagraphs (i) and (ii), the opportunity for continued subsistence uses by local residents; and*
- iv. *to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (i), water quality and necessary water quantity within the Refuge.*

Section 305 of ANILCA and 603 FW 2.8 direct those pre-ANILCA purposes remain in force and effect, except to the extent that they may be inconsistent with ANILCA or the Alaska Native Claims Settlement Act, and that such purposes only apply to those areas of the Refuge in existence prior to ANILCA.

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated wilderness area within Refuge boundaries: Secure an enduring resource of wilderness; protect and preserve the wilderness character of areas within the National Wilderness Preservation System (NWPS); administer the NWPS for the use and enjoyment of

the American people in a way that will leave these areas unimpaired for future use and enjoyment as wilderness; and gather and disseminate information regarding the use and enjoyment of wilderness areas.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System (Refuge System) is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-668ee]).

Description of Use(s): This determination re-evaluates the following wildlife-dependent activities: wildlife observation, wildlife photography and/or videography, environmental education, and interpretation. These uses were found to be compatible under the original Comprehensive Conservation Plan in 1988 and were again determined to be compatible in 1994. While some visitors come to the Refuge specifically to engage in one or more of these non-consumptive activities, many visitors also include these activities as part of a Refuge hunting or fishing trip. (Compatibility of general non-commercially-supported hunting and fishing is evaluated separately). Associated activities, such as camping, backpacking, and hiking, support these wildlife-dependent activities for the purposes of this evaluation. Of these priority public uses, wildlife observation and photography are by far the most widespread.

Interpretive and educational efforts occur primarily in the communities of Arctic Village and Kaktovik, and at the Arctic Interagency Visitor Center in the Dalton Highway Corridor rather than on the Refuge because of the lack of developed visitor facilities and difficult access to the Refuge. Limited, informal interpretive and environmental education services are provided during contacts with visitors on the Refuge by staff on routine patrol. No formal environmental education or interpretive programs are regularly conducted on the Refuge nor are any formal on-site programs planned under the Revised Comprehensive Conservation Plan.

Visitors take advantage of opportunities to view and photograph wildlife, plants, and landscapes in the Refuge. Use is concentrated in areas that are accessible to rivers or larger lakes. These areas generally provide reliable opportunities for wildlife observation, especially along major rivers including the Canning, Chandalar, Hulahula, Kongakut, Sheenjek, and Wind Rivers.

Refuge visitors usually camp on the Refuge for several days while hunting. Campers use tents ranging from small backpacking tents to larger multi-person tents. People can visit the Refuge year-round, but most come to float, hike, hunt, fish, or conduct subsistence activities during the warmer months.

Most of these activities predate the establishment of the Refuge in 1960 and expansion in 1980. Recreational settings on the Refuge are remote. Typical forms of access for all areas of the Refuge include fixed-wing airplanes, motorboats, non-motorized boats, hiking, snowshoeing, snowmobiles, cross-country skiing, and other non-motorized means. However, most non-local visitors access the Refuge by commercial air transportation services from Arctic Village, Coldfoot, Fairbanks, Galbraith Lake, Happy Valley, Kavik, or Kaktovik. Private boats and

airplanes are the most common means of access for local rural residents or the relatively few visitors not using commercial transporters. Day trips to remote areas of the Refuge are uncommon for visitors interested in wildlife observation, wildlife photography, and sightseeing. However, day trips are noticeably increasing in areas near the Dalton Highway Corridor.

Availability of Resources: Adequate Refuge personnel and base operational funds are available to manage these wildlife-dependent recreational activities. Administrative staff time primarily involves phone conversations, written correspondence, public use surveys, and interaction with visitors at the visitor center. Staff will also be involved with any subsequent step-down planning (visitor use management) or for monitoring recreational activities.

Field work associated with administering this use primarily involves conducting patrols to increase visitor compliance with State and Federal regulations. Refuge staff members opportunistically conduct outreach with visitors to minimize the impacts of camping, improve understanding of local residents' subsistence activities, and increase awareness of private inholdings and property. Outreach efforts at the Arctic Interagency Visitor Center in Coldfoot emphasize Leave no Trace camping and hiking practices. Estimated staff time to annually monitor these activities is a full work year.

Anticipated Impacts of Use(s): These activities are anticipated to have negligible to minor effects on most Refuge resources. Possible localized adverse impacts to some plant and wildlife species could occur, but the activities would not have any long-term population-level impacts on Refuge plants and wildlife. Positive effects on the local economy, though small, are anticipated from these uses.

Visitors engaged in non-commercial, non-wildlife-dependent activities may encounter or contribute to the following emerging issues:

1. *Perceived Crowding and User Conflicts* - Simultaneous visits by hunting and recreation groups in some high-use areas due to weather or high demand have led to a reported erosion of visitor experiences and user conflicts.
2. *Physical impacts* - Human waste accumulation and localized vegetation damage has been reported, either from camping or aircraft landing on non-durable surfaces.
3. *Dalton Highway-based Visitation* - There is high probability that the western boundary of the Refuge will continue to become more popular with visitors as awareness of relatively economical Dalton Highway-based access continues to rise. Arctic Refuge managers now consider the Dalton Highway the Refuge's "front country."
4. *Packrafting* - The emergence of commercially-manufactured, lightweight, backpackable inflatable rafts is making rivers and streams that were once unfloatable due to low water or lack of access more available to a range of users. This could potentially change the patterns of use on Arctic Refuge.

During peak visitation, limited landing areas in some drainages may contribute to perceived crowding and user conflicts. Additionally, some localized vegetation damage caused by

landing aircraft or camping on non-durable surfaces has been reported. These are emerging issues that need to be further monitored and evaluated. Future actions may be needed to address these concerns.

Other impacts associated with these activities could be seen. Disturbance to vegetation is site specific, minor, and long-term and would likely be restricted to campsites that receive repetitive use and to aircraft landings on non-durable surfaces. To minimize impacts from aircraft landings, we limit where commercial operators can land. Access to the Refuge during summer months would be by landing aircraft primarily on gravel bars. Winter access would be by aircraft fitted with skis. Landings on vegetated lowland tundra and disturbance to vegetation outside established landing areas would be limited under the stipulations of the special use permit. Although non-commercial aircraft are not required to acquire a special use permit, when possible through outreach, we encourage those operators to land on durable surfaces such as gravel bars and to avoid vegetated tundra or soft surfaces. However, if damage to non-durable surface has been found, it may be necessary to further limit aircraft landings at those sites to reduce impacts to Refuge resources. Additionally, the introduction of invasive species could affect Refuge resources, although it is not known to have occurred by aircraft landings or any of the wildlife-dependent recreational activities in the Refuge to date. Staff will continue to monitor areas for such occurrences. Temporary displacement and/or disturbance to wildlife can occur in response to low-level overflights and during takeoffs and approaches to landings, but impacts would likely be short-term and minimal.

Public Review and Comment: Public comments are being solicited concurrently with the revision of the Refuge's Comprehensive Conservation Plan.

Refuge Determination (check one below):

Use is not compatible

Use is compatible

Stipulations Necessary to Ensure Compatibility: Special use permits are not required for these wildlife-dependent recreational activities, so there are no associated stipulations. However, visitors will be required to comply with existing State and Federal regulations. The Refuge provides information on Leave No Trace principles and other means to minimize impacts to Refuge resources.

Justification: Wildlife observation, wildlife photography, environmental education, and interpretation are four of the six (including hunting and fishing) priority wildlife-dependent uses of national wildlife refuges (605 FW 1). Other uses, such as camping, backpacking, and hiking, support these wildlife-dependent uses. Emerging issues will be further monitored and, if needed, regulated to ensure Refuge resources and visitor experiences are protected. When conducted in accordance with U.S. Fish and Wildlife Service (Service) regulations, I find that these uses will not materially interfere with or detract from the purposes for which the Refuge was created, including Wilderness Act purposes for the Refuge wilderness area and fulfillment of the mission of the Refuge System.

Supporting Documents:

U.S. Fish and Wildlife Service. 1988a. Arctic National Wildlife Refuge Final Comprehensive Conservation Plan, Environmental Impact Statement, Wilderness Review, and Wild River Plans. U.S. Fish and Wildlife Service. Anchorage, Alaska. 609 pp.

U.S. Fish and Wildlife Service. 1988b. Record of decision: Arctic National Wildlife Refuge final comprehensive conservation plan, environmental impact statement, wilderness review, and wild river plans. U.S. Fish and Wildlife Service, November 10, 1988. Anchorage, Alaska, USA.

Refuge Determination:

Refuge Manager/

Project Leader Approval _____
 (Signature) _____ Date

Concurrence:

Regional Chief

National Wildlife

Refuge System _____
 (Signature) _____ Date

Mandatory 10-year Re-Evaluation Date: _____

Mandatory 15-year Re-Evaluation Date (for priority public uses): _____

NEPA Compliance for Refuge Use Decision:

- _____ Categorical Exclusion without Environmental Action Memorandum
- _____ Categorical Exclusion and Environmental Action Memorandum
- _____ Environmental Assessment and Finding of No Significant Impact
- X Environmental Impact Statement and Record of Decision