

COMPATIBILITY DETERMINATION

Use: General Hunting

Refuge Name: Arctic National Wildlife Refuge

Establishment and Acquisition Authority: The Arctic National Wildlife Refuge (Refuge, Arctic Refuge) was established by the Alaska National Interest Lands Conservation Act (ANILCA) (Public Law 96-487 Stat. 2371) on December 2, 1980. The Refuge boundary encompassed 19.64 million acres of land, including the 8.83-million acre Arctic National Wildlife Range (Range), which was established on December 6, 1960, by Public Land Order 2214. ANILCA re-designated the Range as part of Arctic Refuge, designated 7.16 million acres of the Refuge as Wilderness, and designated three wild rivers. In 1988, Public Law 100-395 added 325,000 acres of lands managed by the Bureau of Land Management (BLM) to the Refuge. An additional 1.3 million acres of land, originally selected by the State of Alaska under the Alaska Statehood Act (Public Law 85-508) but later relinquished, was added to the Refuge in two actions occurring in 1983 and 1985. Both these additions were of lands already within the boundaries of the Refuge.

Refuge Purposes: ANILCA established four purposes for the Refuge (including lands and waters in the original Range):

- 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.*

Public Land Order 2214 established the original Arctic National Wildlife Range "for the purpose of preserving unique wildlife, wilderness and recreational values...." These pre-ANILCA purposes apply only to those lands and waters in the original Range, and they remain in force and effect only to the extent they are not inconsistent with ANILCA or the Alaska Native Claims Settlement Act (ANILCA Section 305; 603 FW 2.8).

The Wilderness Act of 1964 (Public Law 88-577) creates the following additional purposes for the designated Wilderness area in the Refuge's boundaries; these purposes are within and supplemental to the Refuge's ANILCA and Range purposes: secure an enduring resource of Wilderness; protect and preserve the Wilderness character of areas in 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]).

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Description of Use(s): Non-guided general 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, Dall's sheep, wolf, and grizzly bear, but hunting for black bear, small game, and waterfowl also occurs on the Refuge, as allowed under State of Alaska hunting regulations (5 AAC). 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 a commercial air operator to access the Refuge. On average, it appears that hunters make up 28 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 operators provide visitor information, including primary activity, location, length of stay, and group size.

Availability of Resources: The Refuge is not staffed adequately to manage and enforce general hunting at current and projected levels. The Plan includes an objective to hire a second full-time law enforcement officer, to be shared with Yukon Flats and Kanuti National Wildlife Refuges. In the interim, we share personnel resources 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 (harvest) 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. Landing aircraft on non-durable surfaces can cause minor to moderate site-specific and long-term effects to Refuge habitats and vegetation. In several areas, soil compaction, scarring, and occasionally rutting have been documented. This is not a problem where aircraft land on durable surfaces such as gravel and sand bars, water, ice and snow, and certain other durable or resistant surfaces. These effects can be minimized or prevented by limitations, including temporal limits, on where aircraft can land, or under what conditions, including aircraft weight or tire configuration. Although not known to occur on the Refuge, landing aircraft could introduce invasive species that could impact resources in the Refuge. We will continue to monitor for such occurrences. Low over-flights, and sometimes landings and take-offs, can disturb or displace wildlife and bother visitors, although the effects are brief and usually minor. Landings on vegetated lowland tundra and disturbance to vegetation outside established landing areas could 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. 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 characteristics 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 on compatibility determinations were solicited concurrently with the draft of the Refuge's Revised Comprehensive Conservation Plan (Plan) and Environmental Impact Statement. Public comments on compatibility determinations were accepted during the public review period for the draft Plan, which was announced in the Federal Register, on local radio stations, and in local newspapers. The 90-day public comment period began on August 15, 2011, and ended on November 15, 2011. We

mailed the full draft Plan, and a summary of the Plan, to the individuals and organizations on our mailing list and posted both on the Refuge's web site. Six public hearings were held in Anchorage, Arctic Village, Fairbanks, Fort Yukon, Kaktovik, and Venetie, during which the Service received comments on the draft Plan. We received one specific comment from an individual on this compatibility determination.

The individual suggested that we combine all consumptive recreation into a single compatibility determination called "Fish and Wildlife Harvest Programs" that would focus on the biological effects of wildlife management activities that are implemented through State regulations. The Service agrees that this is one way that compatibility determinations could be organized, and our policy allows for consideration of uses either independently or as a group of related issues. We feel that analyzing the commercial consumptive recreational uses individually and separate from the non-commercial consumptive uses serves us better for several reasons; the uses are not dependent upon one another, and we can better analyze the use, its potential to impact Refuge purposes, and propose stipulations that apply specifically to commercial users in the permit process when the use is considered individually. The same individual recommended that we not allow food and gear caches in Wilderness. Refuge regulations currently allow for the temporary storage of food and gear, and we believe this is reasonable as caches are often necessary for visitors who make long or expeditionary type trips across the Refuge. Food storage is a concern, however, and during the visitor use management planning process we will consider a requirement that all cached food be stored in bear-resistant containers.

The same commenter also thought the Service's description of "minimal impacts" is not supported by the analysis of the hunting effects on fish and wildlife populations and that this use would have a high potential of impacts to some wildlife populations (e.g., wolf). The State of Alaska has the primary responsibility for management of fish and resident wildlife on all lands in Alaska including national wildlife refuges and has agreed, per the Master Memorandum of Understanding with the Service, to "manage fish and resident wildlife populations in their natural species diversity on Service lands." However, the Service is the final authority over management of fish and wildlife on refuge lands and waters. Both agencies agree "to recognize that the taking of fish and wildlife by hunting, trapping, or fishing on Service lands in Alaska is authorized in accordance with applicable State and Federal law unless State regulations are found to be incompatible with documented refuge goals, objectives, or management plans." The Service believes the existing levels of hunting on Arctic Refuge are compatible with Refuge purposes. If any individual existing or proposed State fish and wildlife management proposal did not conform to the Plan, the Refuge would find the use incompatible and would not allow the use on the Refuge. As for Alaska Department of Fish and Game (ADFG) regulations and the harvest of fish and wildlife, the promulgation of regulations is not a Refuge use and therefore is not subject to compatibility. The "take of fish and wildlife" under State regulations on Arctic Refuge, including all equipment, facilities and services needed to support hunting, was evaluated in two compatibility determinations ("Commercial Big-game Hunting Services" and "General Hunting") and found to "not materially interfere with or detract from the fulfillment of the Refuge purposes and the System mission." Therefore these uses are compatible.

General comments mostly echoed the type of specific comments received about general hunting. Some people felt that all hunting, but especially general hunting, could have an effect on the population structure and genetic diversity of animal populations on the Refuge. Some also felt that general big-game hunting (as opposed to subsistence), which typically involves

commercial services, is inconsistent with Refuge purposes and the management goals stated in the Plan. When allowed, fair-chase principles should be followed. Several commenters felt that the Refuge needed more information on wildlife harvest, particularly in high access drainages, denning areas, feeding sites, or migration corridors. One person commented that hunting should be banned from Arctic Refuge. Several of the commenters from villages in the southern portion of the Refuge were concerned with harvest from non-subsistence hunters in the Red Sheep Creek area. No changes were made to the compatibility determination as a result of public comments except that we updated information on the related (supporting use) issue of aircraft impacts, as in other compatibility determinations.

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, or other minimal impact techniques, 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. General hunting in the Refuge provides the public with quality 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 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.
- U.S. Fish and Wildlife Service. 2011. Arctic National Wildlife Refuge Draft Revised Comprehensive Conservation Plan, Draft Environmental Impact Statement, Wilderness Review, and Wild and Scenic River Review. U.S. Fish and Wildlife Service, June 2011. Anchorage, Alaska, USA.

Refuge Determination:

Refuge Manager/

Project Leader Approval

 8-4-12
Date

Concurrence:

Regional Chief

National Wildlife
Refuge System

 8/15/12
Date

Mandatory 10-year Re-Evaluation Date: 2022

Mandatory 15-year Re-Evaluation Date (for priority public uses): 2027

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
- Environmental Impact Statement and Record of Decision