

COMPATIBILITY DETERMINATION

Use: Commercial Air Transportation Services

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 within 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 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 characteristics. 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. Wheeled aircraft are predominantly used throughout the Refuge, particularly on the North Slope, though float planes are occasionally used for access. Access to the Refuge during summer months is by landing aircraft primarily on gravel bars. The number of useable access sites is therefore limited. Winter access is by "ski-equipped" aircraft. Modes of transport often occur in particular river corridors, based on the water volume of the river and the topography of the river valley. 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. For billing purposes, the operator must report the number of clients dropped off, picked up, and/or shuttled on the Refuge.

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, hiking 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 commercial air operators 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 for 30-45 days per year.

Anticipated Impacts of Uses: 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 have been limited in the Kongakut drainage under the stipulations of the special use permit. 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 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 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 three specific comments on this compatibility determination.

The State of Alaska commented that they fully support responsible use of commercial recreation services and requested that if the Service were to propose to restrict commercial operators in the future, the Plan clarify the Service will commit to an open public process.

One individual commented that we should require all aircraft to have 12-inch identification numbers in contrasting colors which are readily visible while flying and on the ground. This is already a Federal Aviation Administration (FAA) requirement, and all of our permitted air operators must comply with all State and Federal laws as a condition of their special use permits. The Refuge has no authority to require the type of identification numbers on private aircraft.

The Alaska Chapter of Wilderness Watch commented that current use levels may be exceeding what might be compatible, that stipulations on use are not adequate in all circumstances, and that this may be impacting Wilderness character. For example, vegetated surfaces are, and have been, damaged from existing levels of use in some areas. While we have found that the Refuge's current public use programs do not materially interfere with or detract from the Refuge's purposes or the mission of the National Wildlife Refuge System, and are therefore compatible, we acknowledge that the Refuge's public use management program has not fully protected Refuge values, including wilderness characteristics. The Visitor Use Management and Wilderness Stewardship step-down plans will address these issues, and it is likely that one or more uses will need to be reevaluated as part of that planning process. It should be realized, however, that the Refuge has many mandates, including the requirement to provide for reasonable aircraft access to facilitate public use. In some areas, management must balance this access provision with uncompromised protection of natural conditions.

One individual was concerned that there is currently no limit to the number of trips or clients permittees can take to the Refuge, nor is there a limit on the number of commercial air operators permitted to operate on the Refuge. The commenter suggested this should be addressed in a step-down management plan in order to ensure compatibility. The Service plans to address use levels throughout the Refuge in the visitor use and wilderness step-down plans. If the use changes significantly due to restrictions in the future plans, a new compatibility determination will be drafted to reflect the changes.

We modified the description of the use to reflect that most access is by wheeled aircraft and that on the North Slope, pilots mainly landing on gravel bars, when they are available. We also corrected the effects section to reflect that, indeed, some impacts to habitats and vegetation are already occurring when landings are on non-durable surfaces. Additionally, we recognize

that aircraft could be vectors for invasive species, although we have no information or documentation that this is occurring.

During the public review period for the Plan, we noticed that the title and description of one of our compatibility determinations was "State of Alaska Management Activities," when in fact it described only those management activities specific to fish and wildlife management and enforcement performed by the Alaska Department of Fish and Game (ADFG) and the Alaska State Troopers. In addition, the compatibility determination referenced the Master Memorandum of Understanding, which is between ADFG and the Service. The title of the compatibility determination was changed to "State of Alaska Routine Wildlife Management Activities" to better reflect the content and context of the compatibility determination, and State of Alaska agencies are now listed as the Alaska Department of Fish and Game and the Alaska Department of Public Safety Division of State Troopers. We also added the statement "reasonable aircraft access to Refuge lands in Alaska is required by ANILCA" to the justification of this compatibility determination, below.

Nearly all commenters told us that there were too many airplanes flying around the Refuge, particularly in the Kongakut River drainage, that landing sites had proliferated over the years, and overcrowding and visitor conflicts were occurring as a result. Most commenters felt that the Refuge should limit aircraft overflights and landings and designate no-fly zones to preserve visitor's wilderness experience. One commenter felt that no-fly zones were needed or appropriate. All of these issues will be discussed in the Visitor Use Management and Wilderness Stewardship step-down planning processes. This compatibility determination will be revisited at that time to determine the need for changes, if any.

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. For billing purposes, the permittee must report the number of clients dropped off, picked-up, and/or shuttled on Arctic Refuge. The report must be received within 30 days of permit expiration. Failure to report by 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.
8. This permit authorizes use only on Arctic 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.
9. 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).
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. 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.
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 areas not designated as Wilderness 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. 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.
15. 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.
16. 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).
17. 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.
18. 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.
19. The construction or clearing of landing area or pads is prohibited. Incidental hand removal of rocks and other minor obstructions may be allowed.
20. 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.
- 21. 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.
- 22. The preeminent value of 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 characteristics 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: Reasonable aircraft access to refuge lands in Alaska is required by ANILCA. Additionally commercial aircraft operations in national wildlife refuges in Alaska facilitate 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 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. Commercial aircraft operations also provide public access for other compatible Refuge uses (e.g. scientific research).

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.

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

Richard M. 8/7/12
Date

Concurrence:

Regional Chief

National Wildlife

Refuge System

Mike Boyla (Acting) 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