

## Compatibility Determination

**Use:** Scientific Research

**Refuge Name:** Arctic National Wildlife Refuge

**County:** North Slope Borough, Alaska

### **Establishing and Acquisition Authorities:**

The Arctic National Wildlife 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 designated eight million acres as Wilderness, added nine million acres of land, and renamed it the Arctic National Wildlife Refuge (Arctic 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 were modified, purposes expanded, and name changed to Arctic National Wildlife Refuge under the provisions of the Alaska National Interest Lands Conservation Act (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 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 FWS 2.8 direct that 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) purposes are to secure an enduring resource of wilderness, to protect and preserve the wilderness character of areas within the National Wilderness Preservation System, and to administer this wilderness system for the use and enjoyment of the American people in a way that will leave these lands unimpaired for future use and enjoyment as wilderness.

Sec. 4(a) of the Wilderness Act provides that the purposes of the Act are to be within and supplemental to the purposes for which National Wildlife Refuges are established and administered. These purposes are applied to the approximately eight million acres of congressionally designated wilderness within the Refuge. They are also applied to the remaining approximately 11 million acres of Refuge lands (that are not designated as wilderness) in any way that a proposed use might affect the area’s suitability for designation as wilderness.

**National Wildlife Refuge System Mission:** The National Wildlife Refuge System Mission 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.

### **Description of Use:**

This compatibility determination addresses the wide variety of research activities that have historically occurred or may occur on the land now comprising Arctic National Wildlife Refuge. Researchers must obtain a refuge Special Use Permit from the Refuge Manager and make payment of administrative, and if appropriate,

land use fees. For the purposes of this compatibility determination, applicable research includes data gathering for hypothesis testing, modeling, monitoring, and surveys by all outside individuals, agencies or entities other than the Alaska Department of Fish and Game who is covered by existing agreements and a separate compatibility determination. If the Alaska Department of Fish and Game 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 significant partner is considered an administrative activity under 603 FW 2.10 published in the Federal Register (Vol. 65, No. 202).

The 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 would continue to be a common activity. Research activities would occur at all times of the year, but mostly in the spring, summer and fall. A partial list of research categories includes biology, ecology, botany, geology, climatology, glaciology, palentology, archeology, paleoecology, sociology, oceanography, hydrology, space physics, geophysics, and anthropology.

This compatibility determination considers issues of access, logistics, methods, facilities, accountability, and public interaction. Methods of access for research include motor boats, human-powered boats, fixed-wing aircraft, helicopters, dog sleds, hiking, snowshoeing, snowmachines, and cross-country skiing. Logistical support may include basecamps and spike camps with tents, tent frames, weatherports, removable floors, existing administrative cabins, satellite communication systems, human waste management, and temporary fuel and supply caches. 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, it is integral to the study methods, and no reasonable alternative exists. Equipment for sampling may include both 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.

Proposed research and investigation plans developed for Arctic Refuge are expected to be peer reviewed. The type and level of review should be commensurate with the potential significance of the scientific information and its likely influence on policy and management actions as well as the anticipated impacts on refuge resource.

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 are approved by an Institutional Animal Care and Use Committee prior to implementing field work.

Requests for access by helicopter and use of motorized equipment on the Refuge, including the Wilderness and other areas of special designation, are anticipated. These requests would be considered on a case by case basis with regard to the Refuge purposes, the Wilderness Act, and other applicable legislative and administrative provisions.

Maintaining wilderness values and resources, preserving the wilderness character of the biological and physical resources, and providing opportunities for research and recreation are the stewardship focuses for designated Wilderness. As applicable, research in wilderness will be subject to provisions of the Wilderness Act of 1964 which may include an examination of methods, equipment, minimum tool analyses, or administrative practices necessary to successfully and safely administer the Refuge and accomplish Wilderness management objectives.

### **Availability of Resources:**

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. Equipment might include aircraft, trucks, boats, and snowmachines 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 the Use:**

The Refuge Manager would ensure that short term impacts would be minimized through special conditions incorporated within each Special Use Permit. Factors such as project purpose, data collection methods, number of researchers, transportation, aircraft use, fuel storage, garbage/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. Subsistence activities may also experience minor effects. 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.

Long term effects will be prevented by prohibiting incompatible projects and developing and enforcing appropriate permit conditions for approved projects.

### **Public Review and Comment:**

The Refuge acknowledges that research activities have generated concern from some subsistence and recreational users regarding access and radio tags.

Opportunities for public input included a thirty-day comment period as announced in a public notice in the *Fairbanks Daily News Miner* newspaper. This compatibility determination was available for review at the Arctic NWR headquarters in Fairbanks, Alaska, and on the U.S. Fish and Wildlife Service - Alaska Region's compatibility determination Web site:

<http://alaska.fws.gov/nwr/planning/>

Copies were mailed or emailed upon request at (907) 456-0512. Comments had to be received by the Refuge headquarters within the 30 day comment period to receive timely consideration at:

U.S. Fish and Wildlife Service  
Arctic National Wildlife Refuge  
Attn: Compatibility Determination Comments  
101 12<sup>th</sup> Avenue, Box 20, Room 236  
Fairbanks, Alaska 99701

or by email to: [arctic\\_refuge@fws.gov](mailto:arctic_refuge@fws.gov)

The period of public review and comment began 04/18/2005 and ended 05/17/2005. The following methods were used to solicit public review and comment:

Posted notice at refuge headquarters,  
Public notice in newspaper with wide local distribution,  
Letter to adjacent landowners and community governments, and  
Letter to other interested persons.

During the public comment period 29 people sent comments on the draft compatibility statement. Of those 29 people, 26 said that they supported research on the Arctic Refuge. Of those 26 supporters, 6 suggested changes to the draft determination. The remaining three people did not state opposition to research occurring on the refuge, but suggested changes.

Those supporting research valued the Arctic Refuge as an intact Arctic ecosystem and home to a large number of sensitive wildlife species. One person echoed the famous researchers Olaus and Margaret Murie and described the Arctic Refuge as a living laboratory. These characteristics were seen as critical to understanding anthropogenic disturbances as well as climate change. Several comments described the Refuge as a de facto “control area” and remarked on the value of historic datasets that increase in value when compared to new data sets or those from adjacent lands. Several comments described the need to do research in a responsible manner. No suggested changes were apparent from the 20 comments supporting research.

Requested modifications of the draft compatibility determination were focused in three categories: helicopters, lethal or invasive sampling, and the scope of the compatibility determination (who it applied to). Helicopter use has historically been one of the most contentious methods of access to the refuge. Helicopter landings may be permitted under this compatibility determination. They will be subject to “Special Conditions” within a Special Use Permit designed to protect refuge resources from potential detrimental effects. Helicopters are allowed in designated wilderness areas only under section 4(c) when the use has been determined, through a minimum requirement analysis, to be the minimum necessary for managing the area as wilderness, or under section 4(d) that allows helicopters as a use that was established prior to establishment of the area (1980) given wilderness character is not impaired. In areas not designated wilderness, helicopter use is regulated under the “minimal management” guidance of the refuge “Comprehensive Conservation Plan”. Historically, the refuge has not approved helicopter use during dall sheep lambing, and peak caribou calving/post calving periods (June 1-30). Further, alternative access methods are encouraged through consultation and cooperation, and special condition. Special conditions are used to minimize the duration, number, and extent of helicopter flights under the principle of restraint. These processes are transparent to those making public comments here and may greatly improve the experience of refuge users while

maintaining the purposes of establishment. No changes to the compatibility determination were made based on these comments.

Lethal sampling was a concern of six people and review of invasive procedures was a concern for three. Most of these comments were in regard to the vagueness of the language used and considered the language too permissive. Two people opposed lethal sampling outright. The nature of lethal sampling, the purpose, and scope are carefully scrutinized by various agencies with specific jurisdiction as well as by the Arctic Refuge staff. Collecting permits are issued by the State of Alaska for terrestrial species and freshwater and marine fish. Federal collecting permits are issued by the Migratory Bird Division and Marine Mammals Management Branch of the Service. These permits are required for both lethal and nonlethal sampling. In addition, researchers must comply with the Animal Welfare Act. In research, some lethal sampling may be allowed, for example, the collection of plant or animal specimens for reference or the collection of fish otoliths for age determination to characterize the population. However, lethal sampling is rare and more often avoided than not. Procedures such as radio collaring mammals (particularly on large mammals) are commonly used to study these populations. The data provided has been critical in helping researchers discover and explain the needs of the various wildlife populations to managers and policy makers. These findings have been critical to the management and protection of the Refuge as a unique part of the National Wildlife Refuge System. Ultimately, all researchers conducting work on Arctic Refuge also must request and obtain a Special Use Permit that requires the Refuge Manager to approve the activity. The Refuge Manager in deciding what to allow must consider whether the proposed activity helps fulfill the purposes for which the refuge was established. Comments reflected a dislike for the word “important” as a qualifier in the phrase “to collect important data not otherwise available.” Comments suggested that it was vague and subjective. The Service rewrote this sentence to clarify the bar excluding lethal sampling.

Six people commented on the fact that the Fish and Wildlife Service and Alaska Department of Fish and Game are not subject to this compatibility determination. These comments are outside the scope of this determination because they refer to U.S. Fish and Wildlife Service policy 603 FW 2.10 previously subjected to public review and published as final in the Federal Register (Vol. 65, No. 202) on October 18, 2000. In essence, scientific monitoring studies, surveys, and censuses, among

other activities conducted by the Service are within the definition of “Refuge Management activities.” Despite this technicality and to avoid any appearance of sidestepping the issue, Service and State biological programs are subject to the same type of reviews as outside researchers. For example, Service biologists work with, and are scrutinized by, expert groups. Examples are the Porcupine Caribou Technical Committee, North Slope Muskox Working Group, and Office of Subsistence Management Technical Review Committee. These are multi-agency technical groups that review research and programs, both inside and outside the refuge, in their areas of expertise. In addition, the same laws are applied including Animal Welfare Act and the Wilderness Act. No changes to the document were made as result of these comments.

**Determination:**

Scientific research is not compatible

Scientific research is compatible

**Stipulations Necessary to Ensure Compatibility:**

The following stipulations apply to Special Use Permits issued for scientific research. Monitoring authorized research activities would ensure compliance with the permit’s general and special conditions.

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. Serious problems with wildlife shall be reported to the Refuge Manager. Animals taken in defense of life or property must be reported as soon as possible to the Refuge Manager, to Alaska Department of Fish and Game, and to Alaska Fish and Wildlife Protection. Carcasses must be salvaged in accordance with State regulations.
5. The permittee and permittee's employees or coworkers do not have the exclusive use of the site(s) or lands covered by this permit.
6. The use of private or State lands that have been conveyed (patented) is not authorized by this permit.
7. The permit may be canceled or revised at any time by the Refuge Manager in case of emergency (e.g., high fire danger, flooding, unusual resource problems etc.).
8. 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.
9. Prior to beginning any activities allowed by this permit, the permittee shall provide the Refuge Manager with: (1) name and method of contact for the field party chief/supervisor, aircraft and other vehicle types to be used, identification information for these vehicles, and names of assistant and helpers; and (2) any changes in information provided in the original permit application.
10. 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 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.

11. The permittee shall provide the Refuge Manager with a report of activities within 30 days of permit expiration.

12. In accordance with the Archaeological Resources Protection Act (16 USC 470), the removal or disturbance of archaeological or historic artifacts is prohibited. The excavation, disturbance, collection, or purchase of historical, ethnological, or archaeological specimens or artifacts is prohibited.

13. Permittees shall maintain their use areas in a neat and sanitary condition. Removal of human waste may be required. Latrines, if allowed, must be located at least 150 feet from springs, lakes, and streams to avoid contamination of water resources. All property of the permittee must be removed from Refuge lands upon completion of permitted activities.

14. All waste materials must be removed from the Refuge (not buried) upon the permittee's departure.

15. Fixed tent platforms are prohibited. Wall tents with floors that are completely removed from the Refuge at the end of field season are allowed.

16. The construction of landing strips or pads is prohibited. Incidental hand removal of rocks and other minor obstructions may be permitted.

17. The use of off road vehicles is prohibited.

18. The operation of aircraft resulting in herding, harassment, hazing, or driving of wildlife is prohibited. It is recommended that all aircraft, except for take-off and landing, and as necessary for safety, maintain a minimum altitude of 2000 feet above ground level (AGL).

19. Unauthorized caches of fuel or other supplies are prohibited. Fuel storage, if any, will be as outlined in the operations plan and in compliance with regional Service fuel storage policy.

20. Construction of cabins or other permanent structures is prohibited.

21. All information, reports, photos, data, collections, and observations obtained as a result of this permit must be accessible from the permittee at any time upon request by the Service at no cost, unless specific arrangements are made to the contrary. The Service recognizes the proprietary nature of scientific data and will respect the researchers' privileged position regarding first publication. These data may be used in resource management decisions by the Service prior to their publication, however. Proprietary data of commercial value will be treated confidentially upon request, but may also be used in management decisions.

22. Prior to implementing field work, the permittee must provide documentation that activities that involve an invasive procedure that harms or materially alters the behavior of an animal under study have been reviewed and approved by a Institutional Animal Care and Use Committee (IACUC) pursuant to the Animal Welfare Act.

23. The permit holder will 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 disturbance of wildlife and their movements near subsistence hunters, or disturbance to cabins, trails, traditional campsites or caches used by subsistence users.

24. Any action by a permittee that interferes with refuge visitors or impedes access to any site is prohibited. Examples of prohibited acts include: 1) parking aircraft or placing other objects (rocks, tents, etc.) on any area so as to restrict use by other aircraft; and 2) otherwise intentionally interfering in the activity of other refuge users.

25. A 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.

Depending on the specific circumstances, additional special conditions may be applied to the Special Use Permit. These include but are not limited to:

26. Some activities may not be permitted in certain areas and/or during some sensitive time periods (e.g., caribou calving). Area closures and effective dates may be modified by the Refuge Manager as needed. Specific authorization to use localities within special areas may sometimes be obtained on a case-by-case basis, depending on the location of animal concentrations, high public use areas, access route, proposed activity, etc.

27. Occupied raptor nest sites may occur within your intended work area. Unless explicitly exempted, all activities including helicopter flights are prohibited within one-half mile of occupied nest sites during the following periods: (1) north of the continental divide, March 15 – August 15; and (2) south of the continental divide, April 15 – August 15. Sites may be approached on foot or by boat to determine if an occupied nest is located at the site.

28. An annual report of research 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 and publications resulting from the studies will be forwarded to the Refuge Manager for inclusion in the Refuge library.

29. Helicopter use may be authorized on a case by case basis provided that:

a. If helicopters are used, the activity report must include a detailed summary of activities for inclusion in the Refuge helicopter landing database. Helicopter information will include the GPS coordinates in decimal degrees, date, and time of each landing; starting and ending locations for the day, helicopter model, tail number, pilot, and company or ownership; and Special Use Permit number.

b. Landing is prohibited except for the direct support of the activity covered by this permit and emergencies. No recreational use of helicopters is permitted.

c. Overnight stays must be authorized in advance.

d. Personnel transported are restricted to only those necessary to accomplish the authorized activity.

e. Low level slinging of gear from site to site must be authorized in advance.

f. Landings are permitted only at authorized sites: (Project specific list of sites is given here.)

### **Justification:**

In part, conservation units designated in ANILCA were set aside for their scientific value including Arctic National Wildlife Refuge (Section 101). Scientific research is not one of the specific purposes (e.g., wildlife, wilderness, recreation, subsistence, water quality. . .) of the Arctic Refuge, but the U.S. Fish and Wildlife Service supports research as described in the Refuge Manual (4 RM 6). Regarding research the policy reads:

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.

Scientific research activities may be supported in designated Wilderness Areas when wilderness values are not impaired. The Code of Federal Regulations (50 CFR 35.11) states the following:

Recognizing the scientific value of wilderness, research data gathering and similar scientific uses will be encouraged providing that wilderness values are not impaired. The person or agency involved in scientific investigation must be willing to accept reasonable limitations on activities and location and size of the area to be used for research purposes. A Special Use Permit authorizing scientific uses shall be required.

The Arctic Refuge Comprehensive Conservation Plan (CCP) of 1988 broadens the scope of research by recognizing scientific research historically conducted on Arctic Refuge lands (e.g., ecology, glaciology, climatology, geology). The CCP (page 35) reads:

. . . the Service recognizes that research is a valid, traditional use of Arctic Refuge. One of the original interests in establishing the refuge was to provide opportunities for research in the Arctic. All of the management alternatives in the plan would permit legitimate, necessary research (including geological studies), provided it was compatible with refuge purposes.

Refuge Managers need scientific data to fulfill their responsibilities for conserving fish and wildlife populations, their habitats, water quality, and providing subsistence and recreational opportunities. The scientific value of the Arctic National Wildlife Refuge lies in its naturalness and wildness. The Service encourages research that depends on these conditions. Scientific study on the Arctic Refuge also provides opportunities to add to a broader body of scientific knowledge. Research often has a nexus to Refuge purposes. All proposed research covered by this compatibility determination will be thoroughly evaluated prior to authorization. Authorized projects will be monitored to ensure that activities do not interfere with or detract from fulfilling the purposes of the Refuge and the mission of the National Wildlife Refuge System. Scientific Research is therefore found compatible.

## NEPA Compliance for Refuge Use Decision:

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

## Supporting Documents:

Arctic National Wildlife Refuge, Final Comprehensive Conservation plan, Environmental Impact Statement, Wilderness Review, Wild River Plan. Record of Decision Signed November 10, 1988.

**Signature:** Refuge Manager Richard [Signature]  
(Signature and Date)

**Concurrence:** Regional Chief [Signature] 12/21/05  
(Signature and Date)

**Mandatory 10- or 15-Year Re-Evaluation Date:** December 2015