COMPATIBILITY DETERMINATION

Use: Subsistence Activities

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): 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 (dead and down trees), berry picking, and gathering of other plant materials. The subsistence use of house logs and cutting of firewood 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. 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.

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 (some shared with Yukon Flats National Wildlife Refuge) 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. It is estimated that it will take six months of staff time per year for these activities.

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 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 no specific comments on this compatibility determination.

Many general commenters objected to the proposed requirement that Refuge users, including subsistence users, apply for and receive a Special Use Permit for temporary facilities related to the taking of fish and wildlife in designated Wilderness. This proposal was removed and temporary facilities will be treated the same in Wilderness and Minimal Management lands as they have since the 1988 Plan was implemented. Subsistence users in the southern region of the Refuge wanted to ensure they had reasonable access and use of timber resources for firewood and cabin construction. Many local residents and Native organizations felt there was increasing competition for wildlife resources from nonlocal users and were concerned about proper use and care of harvested wildlife.

Generally, commenters requested greater presence and protection of resources on the Refuge by Service officers. Most tribal governments and Native organizations requested more formal and informal consultation on proposed actions that could have implications for Native subsistence users and tribes. Most importantly, we recognize that local residents have traditional knowledge and expertise that could directly benefit Refuge management, and the

Refuge has an obligation to formally consult with tribes on a broad range of management and resource concerns.

All villages within and adjacent to the Refuge wanted to see more full time positions and seasonal job opportunities with Refuge programs. In response, we strengthened the Plan's objective maintaining our commitment to the Refuge Information Technician (RIT) program in Arctic Village and Kaktovik by seeking funding for hiring additional RITs in Venetie and Fort Yukon in collaboration with the Yukon Flats National Wildlife Refuge.

In response to various public comments recommending increased cultural and natural resource protection to ensure subsistence opportunities, we strengthened various objectives in the Revised Plan, including those pertaining to cultural resource management; monitoring and law enforcement efforts; and partnering to improve resource protection. The coordinated objectives will benefit subsistence and resource protection on the Refuge.

Many general commenters wanted to ensure that traditional subsistence access (ANILCA Title VIII subsistence access) to resources would continue while ensuring that the Refuge's natural and cultural resources would not be impacted or degraded by these means of access. We will continue to manage subsistence access under current laws and regulations and will conduct an historical access study in the future.

Changes were made to the compatibility determination in response to the general comments received. Additionally, several changes were made to the Revised Plan's goals, objectives, management policies, and guidelines related to subsistence as a result of general comments.

Refuge Determination (check one below):

_____Use is not compatible

___X___Use is compatible

Stipulations Necessary to Ensure Compatibility: Special use permits are not required for most subsistence activities, so there are no associated stipulations. However, subsistence users will be required to comply with any regulations in place, such as seasonal closures for resource protection. The Federal subsistence management program provides for review and design of subsistence hunting and fishing regulations that ensure protection of fish and wildlife resources on refuge lands, except for migratory birds and marine mammals. The Alaska Migratory Bird Co-management Council regulates subsistence harvest of migratory birds to ensure their conservation. The Marine Mammal Protection Act of 1972, as amended, identifies the Service as being responsible for the management and conservation of polar bears, sea otters, and Pacific walrus. The act established a moratorium on the taking and importation of marine mammals and products made from marine mammals; however, Alaska Natives who take marine mammals for subsistence purposes are exempt from the moratorium. Service regulations address access, harvest of plants, and use of cabins for subsistence purposes on Alaska refuges to ensure compatibility of these uses. Use or construction of subsistence cabins require a special use permit from the Refuge that will include provisions designed to ensure compatibility. Should use of currently used modes of motorized transportation, new cabin construction, or any other subsistence activity grow to levels where it interferes with or detracts from Refuge purposes, appropriate management steps would be taken to maintain compatibility.

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. 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 pp.

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. 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.

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 _____ 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

___X___ Environmental Impact Statement and Record of Decision