# Arctic National Wildlife Refuge Policy of the Northern Alaska Environmental Center

The Northern Alaska Environmental Center advocates stewardship of the Arctic Refuge that will secure uncompromised preservation of its physical and ecological integrity and maintenance of its wild and undeveloped character. Further, management of the refuge must ensure that future generations will have the same opportunity to enjoy the superlative experience that the refuge had to offer when it was established.

The Northern Alaska Environmental Center advocates wilderness designation for all lands within the Arctic National Wildlife Refuge that have been determined to be suitable and qualified for Wilderness designation. Even with that, wilderness designation alone will not provide adequate protection for the unique value of the Arctic Refuge. This is due in part to the degree to which ANILCA has weakened wilderness provisions in Alaska. It is also due to the fact that various agencies have so broadened their definitions of wilderness that they permit a wide range of management actions, developments, and types of uses that would be out of place in the refuge. Therefore, the Northern Alaska Environmental Center calls for stewardship of the Arctic National Wildlife Refuge that follows the provisions of the Last Great Wilderness plan presented below.

# LAST GREAT WILDERNESS STEWARDSHIP PLAN for the ARCTIC NATIONAL WILDLIFE REFUGE

#### History and Background

The campaign to establish the Arctic National Wildlife Range during the 1950's was an important event in American conservation history. The origins and inspiration for the movement trace back to Robert Marshall and Aldo Leopold. While Marshall's primary focus was on preserving a frontier in northern Alaska with its qualities for freedom, exploration and discovery. Leopold focused more on ecological processes and healthy ecosystems. Leopold's now famous work "A Sand County Almanac," first published in 1949, inspired many of the activists who began the effort to protect lands in northeast



Alaska. His statement in reference to wilderness as "the base datum of normalcy for healthy ecosystems" was put into action by those who first surveyed the region for protective status. George Collins and Lowell Sumner were the first to identify and recommend northeast Alaska for preservation in their article "Northeast Alaska: the Last Great Wilderness."

From their earliest writings about the area, the founders stressed the importance of preserving it as they found it, which at that time was virtually "untouched." They also stressed the need to keep a wild landscape such as this free of human intervention and control where ecological processes and evolutionary forces could function as they will. At the same time, these ideas were growing and eventually became embedded in the Wilderness Act, because several of the same advocates for the Arctic Refuge were also advocating for the Act. The preservation of wilderness values is one of the purposes for establishment of the Arctic National Wildlife Range in 1960.

The veracity of the founders dedication to keeping the Arctic Refuge permanently wild can be found in the many statements they made during and following establishment of the Wildlife Range. Here are a few examples with regard to scientific value, and impacts of science:

"the greatest value of the Range is as a control area," (Pruitt 1961)

"It seems to me that what we run the risk of doing with this great untrammeled piece of North America is to despoil it in the name of science. In our zeal we are surely going to change it in some measure. How many Quonset huts, landing fields, vehicle tracks and archeologists' trenches on that ground up there is it going to take before we have gained our respective scientific points and lost the wilderness? Not many... The enthusiasm of ivory tower science can threaten the integrity of the Arctic Wildlife Range as much as oil companies or big game hunters. Let us not spoil the thing that we have set out to save." (Campbell 1961) With regards to the need to reduce or prevent recreational impacts, Margaret Murie reported that during their expedition to the Sheenjek valley in 1956:

"We discussed this problem many times at our campfire (a campfire, by the way which burned only dry dead trees and branches, never standing trees), and we all agreed that many



people could see and live in and enjoy this wilderness in the course of a season, if they would just come a very few at a time, never more than six and leave the campsite absolutely neat." (Murie 1962).

Reflecting on appropriate agency stewardship, Olaus Murie observed:

"...the impression I received from the many Alaskans we talked with...all agreed that this was not just another economic project to promote mass recreation...It should not be placed in bureaus intent on overdevelopment. It was concluded that it would have the least development if we put it in the Fish and Wildlife Service. I hope we were right." (Murie 1963)

The campaign to establish the Arctic National Wildlife Range is also important historically in that many of the principles, purposes and citizen organizing practices developed in the 1950's were expanded, refined and applied in the Alaska National Interest Lands Conservation Act campaign of the 1970's. One of the themes of the later movement was that in Alaska we still had a chance to preserve whole ecosystems and prevent many of the ecological errors that have occurred in the lower 48 states.

During the Alaska lands act campaign, Virginia (Ginny) Wood, a veteran of the Wildlife Range campaign and one of the founders of the Alaska Conservation Society and later the Northern Alaska Environmental Center, testified to the need for appropriate administration of the new conservation areas to assure that the special wild qualities would be permanently preserved:

"I know that after a d(2) bill is passed I will then be fighting to protect the d(2) lands from...the very agencies instructed to protect them."

A similar concern was expressed by Ray Bane, another NAEC founder, regarding the new Gates of the Arctic National Park:

"The goal is to manage this land in such a way that a visitor one hundred years from now could experience the same feeling of discovery...that Bob Marshall felt more than forty years ago."



Following passage of ANILCA in 1980, leading members of the Northern Alaska Environmental Center began the next task: to advocate for appropriate management of the newly created conservation units so that their rare, sensitive wild qualities would be preserved. Their first effort focused on the National Park Service's proposed General Management Plan for the Gates of the Arctic National Park in the early 1980's. A group of NAEC members worked steadfastly to communicate to NPS officials that for Gates it would not be "business as usual," but that a careful, hand on the part of the agency would be necessary to avoid degradation of wilderness character. Humility and restraint on the part of the Park Service must be incorporated in all agency actions. The efforts of the group proved to be highly successful in achieving a Final GMP that has served Gates well over the years.

The next challenge for appropriate stewardship and protection of wilderness values came in the mid 1980's when the U. S. Fish and Wildlife Service initiated its Comprehensive Conservation planning process for the Arctic National Wildlife Refuge. Again, the founders and members of the NAEC organized to influence this crucial process. Included in this effort were Celia Hunter, Ginny Wood, John Luther Adams, Randy Rogers, Roger Kaye and others. Together they developed the "Last Great Wilderness Management Plan for the Arctic National Wildlife Refuge. It was clear that if the wild qualities of the Refuge are to be preserved and passed on into the future, advocates must identify specific principles and practices that are necessary to sustain wilderness character. Thus, rather than speaking only in terms of generalities, this Plan gets at the heart of what is needed to fulfill the vision of the Refuge founders, that it be kept as they found it in the 1950's.

Once the Plan was drafted, NAEC members actively recommended to the Fish and Wildlife Service that the Last Great Wilderness Plan be incorporated as an alternative of the draft environmental impact statement for the CCP. The effectiveness of their persuasion is evident in that the Service decided to include the LGW plan as Alternative G. NAEC organized public support for Alternative G which resulted in a preponderance of public comments in favor of the LGW plan. Comments supporting Alternative G, and comments that supported more wilderness, but did not specifically support a particular alternative, amounted to over 85% of all comments.



It must be recognized that the first Arctic Refuge CCP which was prepared during the pro-development Reagan administration, made no recommendation for additional wilderness in the Final EIS. However, it is important that the record shows there was overwhelming public support for Alternative G, the Last Great Wilderness Plan. This strong show of support became the foundation for the Revised Arctic Refuge CCP and Wilderness Review, completed in 2015 which selected Alternative E and recommended that all suitable lands in the Refuge be designated as Wilderness. In a historic announcement on January 25, President Obama stated that he will recommend to the U.S. Congress that 12.28 million acres (Alternative E) be designated as Wilderness.

## An extraordinary approach

Managers of the refuge must recognize that the preservation of extraordinary values requires an extraordinary stewardship approach. The range of management alternatives normally developed in comprehensive conservation plans for other refuges does not provide an adequate means of meeting the distinctive functions the Arctic National Wildlife Refuge has. Nor do traditional refuge management approaches.

The Northern Alaska Environmental Center offers a stewardship plan for the Last Great Wilderness to meet the interests of preservation of the natural wilderness of the refuge and of the indigenous peoples who have traditionally occupied the land. Elements of this plan include:

- Recommend all eligible areas of the refuge for designation as wilderness.
- Ensure perpetuation of all the refuge's Special Values and especially the wildness and freedom of its ecological and evolutionary processes.
- Maximize protection of fish and wildlife populations and habitats in their natural diversity.
- Maintain high quality opportunities for camping, hiking, floating, wildlife observation, hunting, fishing, trapping and subsistence.



- Maintain in perpetuity the exceptional wilderness experience opportunities of the refuge.
- Emphasize visitor self-reliance, independence, freedom and challenge and minimize government involvement in the experience.
- Reduce the intrusive effect of facilities.
- Address the potential threat of inholdings.
- Provide reasonable access while reducing the impacts of mechanized access.

The following is a descriptive summary of the provisions that characterize this plan.

#### **WILDERNESS**

This plan recognizes wilderness as the overarching purpose for the Arctic Refuge, and thus recommends that all eligible lands within the refuge boundary be designated as Wilderness. To assure that the vision of the founders will be perpetuated in the Arctic Refuge, the specific elements listed below provide guidance for fulfilling their vision. Where these elements are not consistent with ANILCA, specific language will need to be included in the legislation establishing additional Wilderness. It is recommended that in many instances, the Fish and Wildlife Service should address long standing stewardship deficiencies immediately, using existing authorities, rather than leaving their resolution to the uncertainties of future step down plans or deferred management decisions.

# Protection of fish and wildlife habitats and populations

The management objective of the Last Great Wilderness plan is to maintain natural distributions,

numbers, composition and interactions of all indigenous species and to the greatest extent possible, to allow natural processes to control the ecosystem. All actions that have the intent, effect, or potential to manipulate one species for the benefit or detriment of any other should be prohibited. Manipulation of habitats or wildlife populations for the purpose of producing "harvestable surpluses" for hunting, fishing or trapping would undermine the refuge's natural integrity and is prohibited. Although



rare, circumstances might possibly require predator control for the protection of endangered species, in no case would predators be controlled to increase game populations. Artificial fishery management techniques are at variance with biological self-sufficiency and genetic integrity. Many require structures or facilities that are obtrusive. Prohibited fisheries management activities include stocking, egg planting, introduction of alien species, hatcheries, traps, weirs, ladders, artificial fishways and stream and lake fertilization.

A growing body of peer-reviewed scientific literature has identified significant effects on the phenotypical characteristics of a wide diversity of species where the human harvest focuses on the taking of the largest individuals. The Fish and Wildlife Service should conduct an analysis of past and current hunting activities in the Arctic Refuge and assess the nature of such effects on harvested species. This analysis should identify necessary changes to eliminate impacts of trophy hunting that may be affecting phenotypic and genetic diversity of Refuge wildlife.

# Climate Change

Climate Change is and will continue to change the ecology of the Refuge. The Refuge should allow wildlife and ecosystems to adapt and evolve as they will. Intervention and restoration efforts (with their potential for unintended consequences) with the goal of perpetuating species in environments that are becoming less suited to them will be avoided. Perpetuation of the Refuge's free-functioning ecological and evolutionary processes –its essential wildness—is the primary stewardship goal. Research associated with climate change concerns may be allowed in the Refuge so long as the research activities are conducted within the letter and spirit of the Wilderness Act.

# <u>Inholdings</u>

Perhaps one of the greatest long term threats to the wilderness qualities of the central and southern region of the refuge is the potential development of inholdings, particularly allotments. Currently owners of inholdings use them for traditional purposes which are compatible with the refuge purposes. But their heirs may have



different values, and future years could likely see some of these inholdings subdivided and sold, or developed commercially, as has been the case in other areas of the state.

Many owners would like to know that their land will remain natural and kept available for traditional uses by their descendants in perpetuity. On a willing seller basis, some would be receptive to the sale of development rights or scenic easements. Such an arrangement would protect wilderness values at a lower costs than fee-simple purchase and assure inholders of continued ownership and use.

This plan would identify as a refuge priority negotiations for the acquisition of development rights and scenic easements of inholdings whose inappropriate use or development use would threaten important refuge values. It would specify that a high priority be given to this goal in the refuge's annual work plans and that a portion of its annual funding be dedicated to this purpose.

#### Facilities

Facilities erode the symbolism of ultimate wilderness for which the Arctic Refuge is renowned. They strike at the naturalness and sense of isolation from civilization of the refuge; they represent what most visitors come so far to escape. What offends is not only the visual impact, but just knowing that around the next bend there may be a building or other intrusion. Buildings concentrate use, attract unauthorized use, accumulate refuse, can cause incidents with wildlife and detract from scenic values. They are unnecessary for wilderness stewardship. Administrative field operations necessary for refuge stewardship should rely on mobility and utilize temporary tent camps and facilities.

This plan would specifically prohibit the construction of any permanent administrative, research or recreational facilities within the boundaries of the refuge. It would specify removal of the unnecessary, and unsightly cluster of structures on the shore of Peters and Schrader Lakes. These alpine lakes are the most beautiful and popular of the eastern Brooks Range and are favored access points for refuge visitors. The buildings are inappropriate at this scenic location and are inconsistent with Wilderness. The administrative cabin at Big Ram Lake should also be removed.



Log cabins with legitimate historic value would be allowed to remain. Traditional and customary use of existing cabins would be allowed to continue under authorization of a permit as long as that use remains consistent with the purposes of the refuge.

# Recreation Management

The core of this plan's recreation management policy is that the superlative wilderness experience opportunity the Arctic Refuge has to offer shall not be diminished or lost. Future generations shall have the right to experience this area in its authentic and pristine condition and to do so on its own terms to enjoy adventure, challenge, solitude, discovery, risk, and freedom.

Public recreation including, but not necessarily limited to, camping, hiking, wildlife observation and study, photography, hunting, fishing, trapping, and other related activities, should be allowed to continue subject to such minimal and reasonable regulations as are deemed necessary to prevent damage to resource and wilderness values. Recreational "improvements" facilities, cabins, roads, trails, campgrounds, bridges and signs would be intrusive upon the refuge's nearly complete absence of human influence and would be prohibited.

This plan would provide protection for physical and biological resources as well as visitors and subsistence users from the influence of excessive numbers of and sizes of groups. It recognizes that we need not repeat the mistakes of the past here to learn that this sensitive environment cannot support unlimited use and maintain its special values. This plan mandates physical and social carrying capacity research and the implementation of appropriate use limits within four years. Also mandated is the development of specific standards for maintaining natural and wilderness qualities, which if exceeded, would require management action.

This plan requires that commercial activities in the refuge shall be limited to those that are necessary and appropriate for public use and enjoyment of the refuge. The number of commercial guides would be limited in each area of the refuge, the numbers to be based on the results of carrying capacity research. Necessary limitations of public use must not favor commercial guiding operations. This plan would specify that when use



of an area must be limited, those who come to do a wilderness trip on their own shall not be displaced by those who purchase a packaged experience from an operator.

Beyond protection of resources and wilderness qualities, agency involvement in the recreational experience should be minimal. Respect for visitor freedom, independence and self-reliance should be a principal management goal. Visitor management should be as unobtrusive, subtle and low profile as possible.

Visitor safety must be considered, but establishing programs for visitor protection such as safety checks would not be an objective of recreation management under this plan. The possibility of danger, the chance of risk are recognized as an integral part of the area. Without them, some of the wild would be taken out of the Arctic wilderness. Management would not take responsibility for the visitor's safety from him, for to do so would depreciate the experience, discourage proper preparation and increase agency liability.

# Hunting, Fishing and Trapping Management

Hunting, fishing and trapping are traditional activities on the Arctic Refuge and are a popular means by which visitors enjoy refuge values. Management objectives of the hunting, fishing and trapping programs under this plan require maintenance of natural distribution, numbers and composition of game species. The highest standards of sportsmanship and fair chase must be enforced on the Arctic Refuge. Management should emphasize the quality and naturalness of the experience here, rather than maximizing the catch or kill.

Because of the low productivity of high latitude mountain lakes, the goal in management sport fishing would be to minimize fish take. Fly-in trophy fishing would be discouraged. Visitors should be encouraged to practice catch-and-release methods and to keep only fish that will be consumed in the area.

## <u>Information and interpretation</u>



The Last Great Wilderness management plan will specify use of information as a management tool that will enhance appreciation of the unique opportunity afforded here and provide understanding of the need for protective provisions, including regulations. It will encourage behavior by users that will minimize their impact on resources and promote compliance with regulations.

The principle theme of the interpretive program would be that a very special type of opportunity is available here, one that has vanished from most refuges and parks. More than anywhere else, the Arctic Refuge is a place where one can go it alone to be in control of the experience and make it their own. This plan would maintain this refuge as a place where the individual, not the government, finds his own way and interprets what he sees. To maintain the experience as one that visitors must search out for themselves, no brochures will be developed telling visitors where to go, how to get there and what to see. To maintain the refuge's themes of discovery, mystery and unknown, this plan would prohibit interpretive programs and materials from featuring "attractions", which would take from visitors the joy of discovering natural features on their own. Opportunities for self-reliance, independence, challenge and adventure in finding one's own way would not be minimized by any materials detailing trails, routes or river crossings. Signs, displays, brochures and programs which "interpret" the wilderness diminish its aura of unknown, mystery, adventure and exploration and would not be produced by the agency.

Information would not advertise the refuge nor be designed to promote visitation. Rather it should emphasize self-reliance, preparedness and independence. Prospective visitors would be informed that those who desire convenience, security or a more casual experience would best be served by one of the many other refuges or parks in the state. Those who seek the most authentic condition of wilderness have increasingly fewer choices, but will always be able to find it in the Arctic Refuge.

## **Access**

The Last Great Wilderness plan strikes a balance between providing reasonable opportunities for mechanized access and protecting wildlife and visitors from the



annoying effects of various motorized conveyances. The following provisions would apply to the agency as well as to the public.

All terrain and off road vehicle are not an established or customary and traditional means of access. Their use would be entirely out of place in the refuge and would continue to be prohibited.

Conventional motorboats would continue to be allowed for access on all rivers except designated Wild and Scenic rivers. Airboats and jet-boats would be prohibited because of their excessive noise, disruptive to wildlife and other visitors alike.

Use of motorboats is neither traditional nor useful for access to the highly scenic mountain lakes such as Peters-Schrader, and Porcupine. Establishment of such use would erode the solitude and quiet beauty of these serene waters. Such use would be prohibited.

Fixed wing aircraft are a valid and necessary means of access, but resource and wilderness values would be eroded in the future if their use continues unrestricted. Under this plan, landings would be limited to durable surfaces such as gravel bars, water, ice and snow, or by special use permit where it can be demonstrated that surface disturbance will not occur. Damage to fragile tundra surfaces, such as has occurred at the Aichilik landing area and several others, must be prevented. Construction of airstrips would be prohibited.

A goal of this plan would be to provide a few areas that are free of all forms of mechanization, including aircraft. The Mancha Creek-Firth River area currently has little aircraft use. In this area, a system of designated landing zones would be established, located so that several days of backpacking time could be assured between zones without seeing aircraft on the ground. No area would be so distant from a landing zone so as to preclude access by a reasonable hiking effort. The FAA would be requested to establish a reasonable airspace closure, as was done successfully in the Minnesota Boundary Waters Canoe Area. Such a closure would not interfere with any established airways or flight routes and existing provisions for emergencies would apply. To the



greatest extent practical, it would insulate the wilderness traveler here from the influence of aircraft and other mechanization.

Research in the Arctic Refuge has shown that encountering parked aircraft is considerably more detrimental to the experience non-consumptive recreationists seek than that of hunters. For that reason, overnight parking of aircraft and aircraft camping would be temporally zoned. It would be prohibited during the primary recreational use period (May through mid-August) but allowed after that period.

Snowmobiles would be permitted according to the provisions of ANILCA, except in the above mentioned aircraft restricted area, where they have no established pattern of use.

Helicopters are highly disruptive to wildlife and visitors and would be prohibited except for use in emergencies or when they are the minimum tool necessary for administration of wilderness. In no case would they be permitted for recreation, VIP tours or agency transportation when other methods are available. A minimum flight level of 2,000 feet AGL would be enforced, except when safety considerations require otherwise.

# Cultural Resource Management

The Last Great Wilderness plan seeks to preserve archeological and cultural resources in their natural context. While superficial studies are appropriate, excavations and digs undertaken for scholarly papers, graduate degrees, museum collections or interpretive material cannot justify the intrusion and irreparable loss they cause and would be prohibited. Unless threatened with loss, sites that have remained undisturbed for thousands of years can well remain a mystery until less

damaging techniques are developed. This plan would specify that the agency request that the U.S. Board of Geographic Place Names leave all currently nameless features in the refuge unnamed.

#### Conclusion



The Arctic National Wildlife Refuge stands as a national benchmark of naturalness, ecological integrity, scenic beauty and exceptional wilderness experience opportunity. These are the criteria against which all proposed policies and actions must be tested if the special promise of the refuge is to be maintained and passed on to the future. This must be a place of restraint and sensitivity for management as well as the visitor.

The plan proposed here represents the vision of the early conservationists responsible for establishing the refuge and the organizations that have worked for its expansion and continued protection. Its provisions have received wide support during the scoping process. They would best meet the stated purposes of the refuge. The Northern Alaska Environmental Center endorses this plan for the comprehensive conservation plan of the Arctic National Wildlife Refuge.

Note: The Refuge's 2015 revised Comprehensive Conservation Plan well recognized the Refuge's Special Values that underlie this plan. They are included here.

# 1.5 Special Values of the Arctic Refuge

Section 304(g)(2)(B) of ANILCA requires that, prior to developing a CCP, the Secretary of the Interior "shall identify and describe the special values of the refuge, as well as any other archeological, cultural, ecological, historical, paleontological, scenic, or wilderness value of the refuge." In meeting this requirement, the Fish and Wildlife Service drew upon a variety of sources that reflect the range of values the Refuge holds for the American public. These source include the documents related to the forementioned original and ANILCA Refuge purposes, comments received from the public during previous planning processes, meetings with various stakeholders, a review of media accounts of the Refuge, two studies of Refuge visitors, a study examining national interest in the Refuge, and scientific reports. [cite an appendix, or the References section] The following list and description of special values summarizes the most prominent Refuge values that emerged from examination of these sources.

#### 1.5.1 Wilderness Character



Since first proposed, the Arctic Refuge has exemplified the purpose of wilderness, to leave some remnants of this nation's natural heritage intact, wild, and free of the human intent to control, alter, or manipulate the natural order. An intangible value, the Refuge's wilderness character embodies the essential wildness of its landscape and wildlife and the natural processes in which they are embedded. The Refuge is distinctive in the degree to which it epitomizes the Wilderness Act's definition of wilderness: "an area where the earth and its community of life are untrammeled by man."

# 1.5.2 Ecological Values

The distinguishing ecological aspect of the Refuge—and a major reason for its establishment—is that this single protected area encompasses an unbroken continuum of arctic and subarctic ecosystems, their unaltered landforms, and the full complement of their native flora and fauna, with the exception of one bird, the extirpated Eskimo curlew. This is a repository of uninterrupted ecological and evolutionary processes, exhibiting the highest measure of biological diversity, integrity and wholeness. Bordered by four conservation units, the Refuge preserves the core of what is one of the world's largest transboundary protected areas.

#### 1.5.3 Wildlife Values

The Refuge's diverse fauna includes forty-five species of mammals, including many High-interest and special-status species: polar, grizzly, and black bears, the wolf, wolverine, Dall sheep, moose, musk ox, bowhead whale, and two free-roaming caribou herds. Thirty-six species of fish inhabit Refuge waters. More than 170 species of birds depend upon the Refuge for at least some portion of their lifecycles, their migrations reaching all corners of the Earth. Of central importance is the wild context in which these and all the Refuge's life forms occur, with their natural behavior, interactions, cycles, and ecological roles continuing.

#### **1.5.4 Rivers**



The Refuge encompasses perhaps the largest set of fully-intact, free-flowing rivers in the United States. Three are designated as Wild—the Sheenjek, Wind, and Ivishak—but the Refuge ensures perpetuation of the remote, undeveloped, primeval nature of all the 40-some rivers within its boundaries. Some tranquil, some tumultuous, their character is as varied as the spruce forests, ramparts, canyons, gorges, and open tundra through which they flow. Ancient travel corridors for wildlife and Native people, they also provide diverse opportunities for today's seekers of adventure, solitude, and escape.

## 1.5.5 Landscape Scale and Features

From its southern forests across the precipitous mountain divide and to its costal lagoons and islands along the Beaufort Sea, this 19.3 million acre Refuge—the size of South Carolina—spans five major physiographic zones. Its vastness encompasses innumerable wetlands and deep, expansive lakes, warm springs, aufeis fields, pingos, the highest peaks of the Brooks Range and their many active glaciers, broad alleys, steep river canyons and secretive ravines, waterfalls, fossil beds, caves and caverns, sheer walls of folded and faulted rock, mesas, pinnacles, and spires. They represent the unending variety of this landscape's physical features—many dramatically scenic, others quietly sublime, many remaining nameless, some as yet undiscovered.

#### 1.5.6 Scientific Values

As intended, the Refuge has become a "natural laboratory" of international significance. Its ecological diversity, the free functioning of its natural communities and the ongoing processes of their genesis provide unsurpassed opportunities for scientific understanding of wildlife, ecology, geophysics, and the changing climate. Numerous long-term investigations provide insights into the natural order, both as it functions naturally and as it responds to largescale human-caused influences.

#### 1.5.7 Native Culture and Subsistence

The Arctic Refuge encompasses the traditional homeland of Inupiat and Gwich'in peoples and perpetuates opportunities for their continuing traditional subsistence



uses, skills, and relationships with the land. Their contemporary use sites are often shared with millennia-old archeological sites—part of the living link between the indigenous peoples' past and present ways. This land holds the bones of their ancestors and the ground of their future. It provides opportunities for us all to understand and respect the diversity of human history, culture, and ongoing lifeways.

## 1.5.8 Historic and Heritage Values

While the story of the Refuge's establishment chronicles the emergence of the new, ecology-based approach to landscape management and protection, it also reveals the nation's desire to perpetuate part of its cultural heritage. This place is a remnant of frontier America. It is one of the finest representations of the wilderness that helped shape our national character and identity and had always been part of the American psyche.

### 1.5.9 Recreational Values

The Refuge is renowned for the opportunities it provides for genuine adventure, exploration, independence, and solitude. Whether visitors come to hunt, view, or photograph wildlife, for the challenge of an arduous backpacking trek or a wild river float, or just to enjoy the area's stark beauty from the comfort of a base camp, they can find themselves immersed in a world as distant from the distractions of modern civilization as anywhere. Where the wild hasn't been taken out of the wilderness, this Refuge remains a place where freedom and discovery prevail, where the sense of mystery and horizons unexplored remains alive.

#### 1.5.10 Hunting Values

Hunters played a critical role in establishing the original Range, advocating a place for the adventurous, fair-chase pursuit of game "in the highest tradition of the sport." This is a setting for those seeking exceptional natural, uncrowded, and primitive conditions, and willing to rely on skill, to be self-reliant, expend real effort, meet challenge, and follow ethical restraints. For them, the Refuge's remote expanses offer hunts



reminiscent of our frontier heritage, hunting experiences as authentic as can be found in this increasingly domesticated world.

# 1.5.11 A Symbolic Value

Since the first efforts to establish a Last Great Wilderness, most people who value this landscape have been less interested in how it can be used than in what its continued preservation represents. Millions who will never come find satisfaction, inspiration, even hope in just knowing the Refuge exists. The Refuge represents the hope of a past generation for all future generations, that one of the finest remnants of our natural inheritance will be passed on, undiminished. For many people, the question of the Refuge's future has now come to symbolize daunting questions the nation faces regarding energy policy, sustainability, and our effect upon the larger biosphere we jointly inhabit.

