

1. Introduction

The Arctic National Wildlife Refuge (Arctic Refuge, Refuge) encompasses approximately 19.3 million acres of land and water in northeastern Alaska (Map 1-1) and is administered by the U.S. Fish and Wildlife Service (Service) as a unit of the National Wildlife Refuge System (Refuge System). This document is the draft revision of the 1988 Comprehensive Conservation Plan (Plan, Revised Plan) currently used to manage Arctic Refuge. It describes six alternatives for revising the 1988 Plan and assesses the effects of implementing each of the alternatives. When the Revised Plan is finalized, it will replace the current management direction as described in the Arctic National Wildlife Refuge Final Comprehensive Conservation Plan/Environmental Impact Statement/Wilderness Review/Wild River Plan (Service 1988a) and associated record of decision (Service 1988b).

Chapter 1 provides background information on: the framework used to develop this document, including the reason the Service is revising the existing plan; legal and policy guidance for Refuge management; an overview of the purposes for establishing the Refuge and the special values of Arctic Refuge; the Refuge's vision and goals; and an explanation of the planning process, including how the public is involved, what planning issues were identified by the public and Refuge staff, and how these issues are addressed in the Plan.

1.1 Purpose and Need for Action

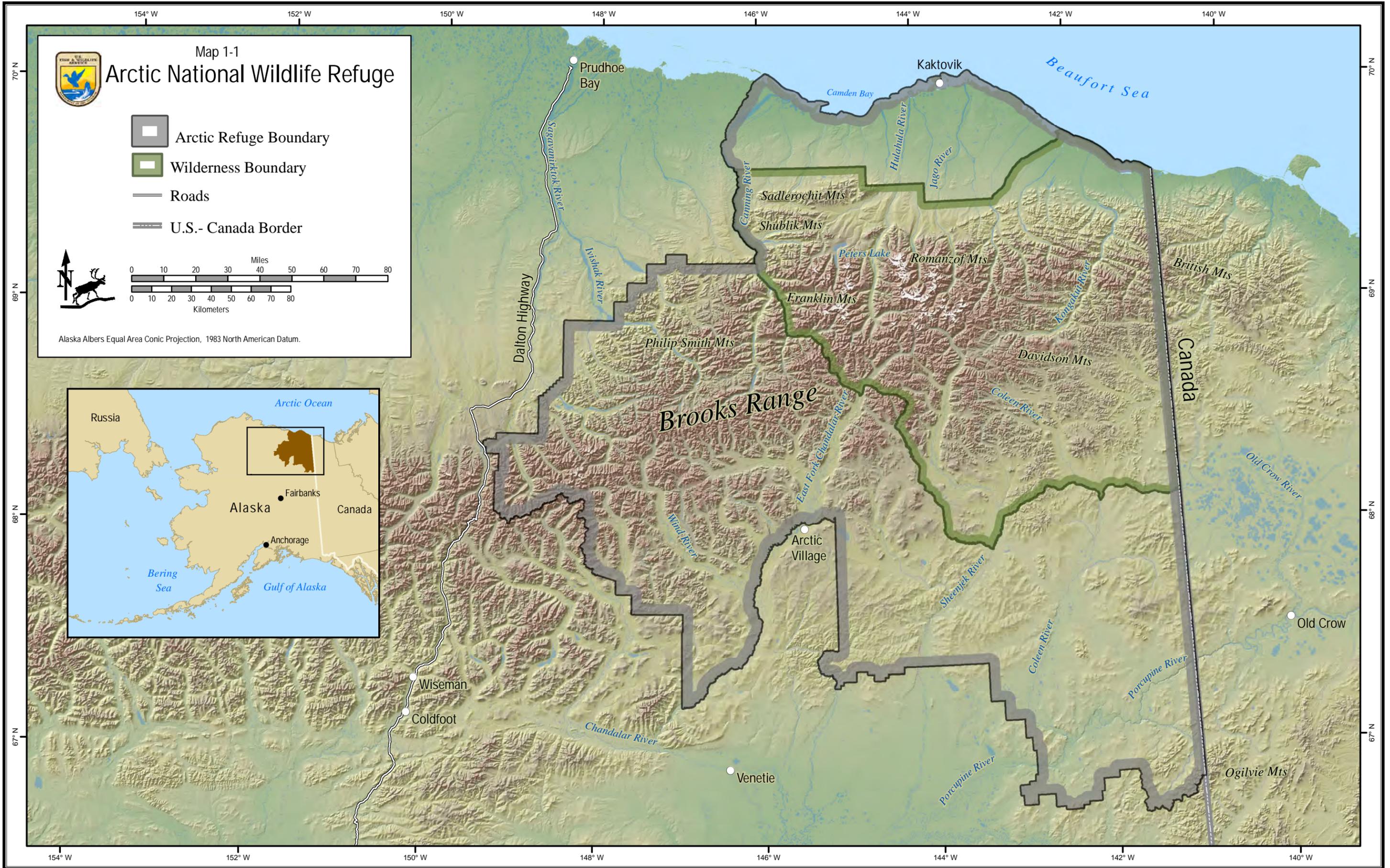
Comprehensive conservation plans are dynamic documents requiring periodic review and updating, and much has changed since the initial Arctic Plan was completed in 1988. Revision of the Plan is also prescribed by Section 304(g) of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), as amended, which directs the Secretary of the Interior to prepare and, from time to time, revise a comprehensive conservation plan for each refuge in Alaska.

The purpose of this planning process is to develop a Revised Plan for Arctic Refuge to provide management direction for the next 15 years. The revision follows guidance found in ANILCA and other Federal laws, primarily the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, and the National Environmental Policy Act of 1969 (NEPA), as amended.

Revising the comprehensive conservation plan allows the Service to do the following:

- Update management direction related to national and regional policies and guidelines used to implement Federal laws governing Refuge management
 - The National Wildlife Refuge System Improvement Act became law in 1997 and includes new requirements for Refuge management.
 - New national policies provide direction for wilderness stewardship, public use, wildlife conservation, and ecosystem management.
- Describe and protect the resources and special values of Arctic Refuge
- Incorporate new scientific information on resources of the Refuge and surrounding areas

- New information about Refuge fish, wildlife, and habitats is available. Refuge staff have learned more about the status of wildlife populations and how these populations use the Refuge's lands and resources.
- Climate change has emerged as a factor potentially affecting all aspects of the Refuge environment; while future effects are uncertain, climate change scenarios must be considered in management decisions.
- Cumulative effects of industrial development and other uses of lands outside of Refuge boundaries are potentially significant for the fish, wildlife, and habitats of the Refuge. Uses of adjacent lands and human demographics have changed since the last plan was completed, and they must be considered when developing the new plan.
- Evaluate current Refuge management direction based on changing public use of the Refuge and its resources
 - Public use of the Refuge has changed, contributing to cumulative impacts, potential conflicts, and concerns about the quality of people's experiences.
 - A Federal Subsistence Management Program was initiated in 1990 in cooperation with the State of Alaska (State) to ensure federally qualified subsistence users have a priority opportunity for consumptive use of fish and wildlife resources on Federal public lands.
 - The Dalton Highway was opened to the public in 1994, providing new ways to access the Refuge and changing patterns of use.
- Ensure the purposes of the Refuge and the mission of the Refuge System are being fulfilled
- Ensure that opportunities are available for interested parties to participate in the development of management direction
- Provide a systematic process for making and documenting resource management decisions
- Establish broad management direction for Refuge programs and activities
- Provide continuity in Refuge management
- Establish a long-term vision for the Refuge
- Establish management goals and objectives
- Define compatible uses
- Provide additional guidance for budget requests
- Provide additional guidance for planning work and evaluating accomplishments



1.2 Planning Context

Arctic Refuge is part of a diverse system of more than 550 wildlife refuges stretching across the nation. Arctic Refuge is administered to meet both its unique establishing purposes and to serve the broad mission of the Refuge System.

Vast, natural, and wild, Arctic Refuge serves a distinctive function in this system. The Refuge challenges the Service to think beyond the historic role of refuges as a means to protect or propagate single species. Rather, the Refuge offers the opportunity to protect all life forms, their encompassing natural processes, and a range of tangible and intangible values. In making decisions affecting the future of Arctic Refuge, we remain mindful of the vision shared by those who fought for its creation—that this should be a place for humility and restraint, for the Service as well as visitors.

1.2.1 *The U.S. Fish and Wildlife Service*

Part of the Department of the Interior, the Service is the principal Federal agency responsible for conserving, protecting, and enhancing the nation’s fish, wildlife, plants, and their habitats. In addition to the Refuge System, the Service operates national fish hatcheries, fishery resource offices, and ecological services field stations. The Service enforces Federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally important fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It oversees the Federal Aid in Wildlife Restoration Program, which distributes to State fish and wildlife agencies hundreds of millions of dollars derived from excise taxes on fishing and hunting equipment.

The mission of the U.S. Fish and Wildlife Service is:

“Working with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.”

1.2.2 *The National Wildlife Refuge System*

The National Wildlife Refuge System comprises more than 145 million acres of Federal lands, encompassing more than 550 national wildlife refuges, six national monuments, thousands of small wetlands, and other special management areas. Refuge System lands are located in all 50 states and the territories of the United States.

The Refuge System was created to conserve fish, wildlife, plants, and their habitats. This conservation mission includes providing Americans with opportunities to participate in compatible wildlife-dependent recreation, including fishing and hunting, on Refuge System lands and to better appreciate the value of and need for fish and wildlife conservation.

There are 16 national wildlife refuges in Alaska (Map 1-2). These refuge lands contain a wide range of habitats with varied terrain, including mountains, glaciers, tundra, grasslands, wetlands, lakes, woodlands, and rivers. Together, the 16 refuges comprise 76.8 million acres and constitute about 53 percent of the Refuge System.

The mission of the National Wildlife 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)

1.2.3 Principles for Managing the National Wildlife Refuge System

The National Wildlife Refuge System Administration Act of 1966 (Refuge Administration Act), as amended, states that each refuge shall be managed to fulfill both the purposes for which the individual refuge was established and the mission of the Refuge System. When there is a conflict between refuge purposes and the mission, the purposes of the refuge shall take priority. The act requires that any use of a refuge support the purposes of the refuge and not materially interfere with or detract from the purposes of the refuge or fulfillment of the mission of the System.

The 1997 amendments to the Refuge Administration Act identified a number of principles to guide management of the Refuge System. They include the following:

- Conserve fish, wildlife, and plants, and their habitats within the Refuge System
- Maintain the biological integrity, diversity, and environmental health of the Refuge System
- Carry out the mission of the Refuge System and the purposes of each refuge (except that if a conflict exists, refuge purposes are protected first)
- Coordinate, interact, and cooperate with adjacent landowners and State fish and wildlife agencies
- Maintain adequate water quantity and water quality to meet refuge and Refuge System purposes and acquire necessary water rights under State law
- Maintain hunting, fishing, wildlife observation and photography, and environmental education and interpretation as the priority general public uses of the Refuge System
- Provide opportunities for compatible wildlife-dependent public uses within the Refuge System
- Provide enhanced consideration for wildlife-dependent uses over other public uses in planning and management within the Refuge System
- Provide increased opportunities for families to experience compatible wildlife-dependent recreation, particularly traditional outdoor activities such as fishing and hunting; and
- Monitor the status and trends of fish, wildlife, and plants within each refuge

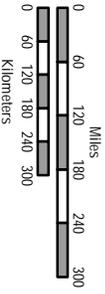
To maintain the health of individual refuges, and the Refuge System as a whole, managers must anticipate future conditions. Managers must endeavor to avoid adverse impacts and take positive actions to conserve and protect refuge resources. Effective management also depends on acknowledging resource relationships and acknowledging that refuges are parts of larger ecosystems. Refuge managers work together with partners—including other refuges, Federal and State agencies, tribal and other governments, Native organizations and entities, and non-governmental organizations and groups—to protect, conserve, enhance, or restore native fish, wildlife, plants, and their habitats.



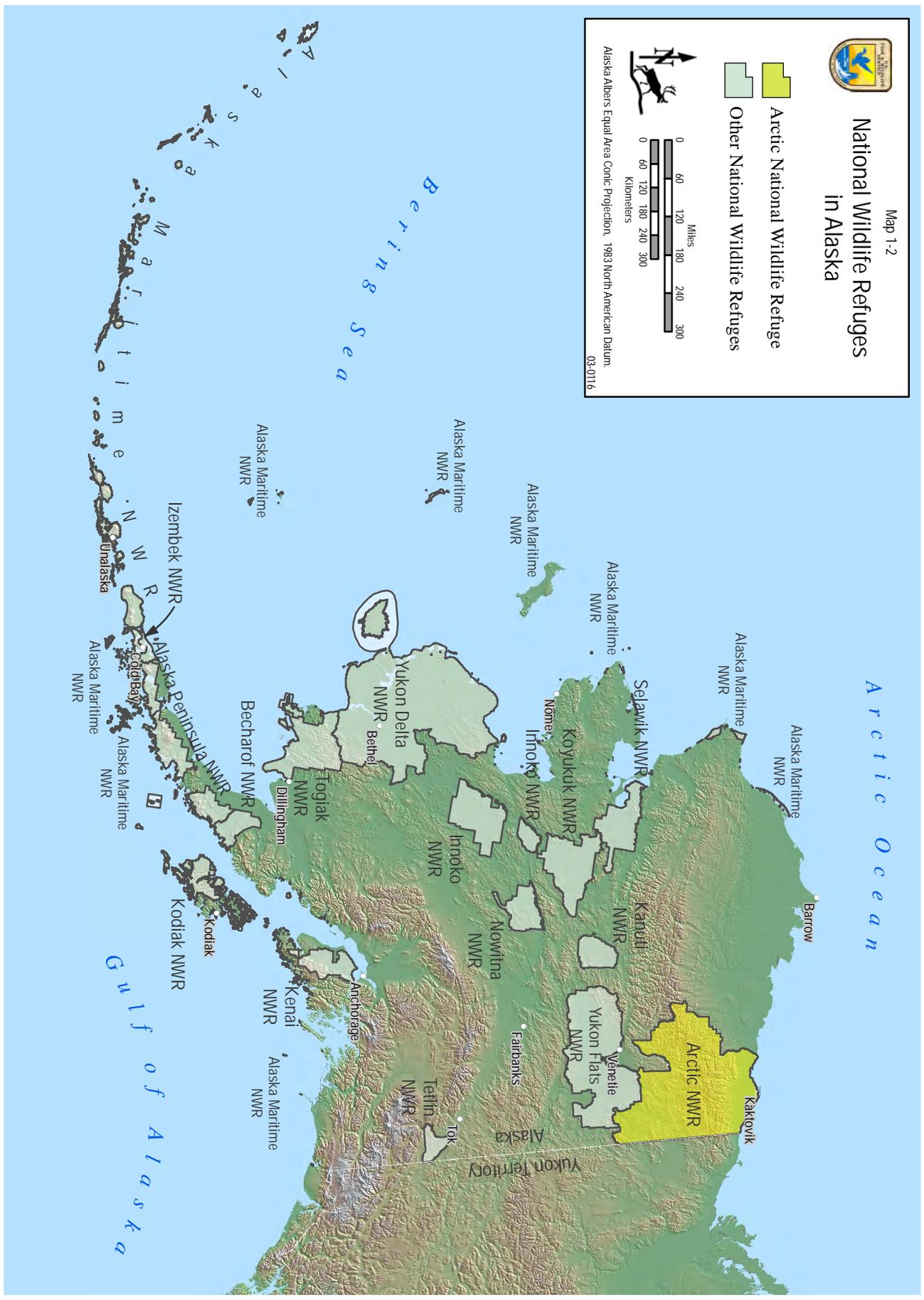
National Wildlife Refuges in Alaska

Map 1-2

-  Arctic National Wildlife Refuge
-  Other National Wildlife Refuges



Alaska Albers Equal Area Conic Projection, 1983 North American Datum, 03-0116



1.3 Legal and Policy Context

Most refuges are created by legislation or executive action that defines the purpose for creating the unit and largely dictates how the refuge will be managed. However, management is also guided by other laws, regulations, and policies, and in the case of Alaska refuges, agreements with the State of Alaska. This section identifies the laws and the policy guidance that are integral in the development of this Plan.

1.3.1 Legal Guidance

Operation and management of refuges throughout the Refuge System are influenced by a wide array of laws, treaties, and Executive orders. Among the most important are the Refuge System Administration Act, as amended by the Refuge System Improvement Act; the Refuge Recreation Act; and the Endangered Species Act. Brief descriptions of these and other pertinent legal documents that influence management of Arctic Refuge are in Appendix A.

Established in 1960, the Arctic National Wildlife Range (Arctic Range, Range) was created to preserve its unique wildlife, wilderness, and recreational values. These purposes continue to guide management of lands in the original Range. ANILCA, as amended, expanded and re-designated the Range as the Arctic National Wildlife Refuge and provided additional purposes that guide management of the entire Refuge. For Arctic Refuge and other national wildlife refuges in Alaska, ANILCA provides key management direction. ANILCA sets forth the purposes of the Refuge, defines provisions for planning and management, and authorizes studies and programs related to wildlife and wildland resources, subsistence opportunities, and recreation and economic uses. ANILCA also provides specific direction for the management of designated wilderness areas and wilderness study areas in the State of Alaska.

By Refuge System policy, wilderness reviews are required elements of comprehensive conservation plans. The purpose of the wilderness review is to identify and recommend to Congress lands and waters that merit inclusion as part of the National Wilderness Preservation System. The Service is conducting a wilderness review as part of this Revised Plan (see Appendix H). Each alternative in this document includes a wilderness recommendation based on this evaluation and the management directions of the alternative.

The Wild and Scenic Rivers Act of 1968 established the National Wild and Scenic Rivers System, allowing Congress to designate certain rivers as wild, scenic, or recreational. It authorized the Secretary of the Interior to study areas and submit proposals to the President and the Congress for addition to the system. This document includes a review of Refuge rivers and their potential for inclusion in the National Wild and Scenic Rivers System.

1.3.2 Policy Guidance

Programmatic guidance and policy documents provide additional direction for management of national wildlife refuges. These documents include:

- U.S. Fish and Wildlife Service Manual
- Director's orders
- National policies
- Handbooks

- Director's memoranda
- Regional directives

Although it is not practical to provide information about all of these documents in this Plan, they are critical to management of the Refuge. Much of the management direction described in Chapter 2, and in other parts of this Plan, is influenced by guidance from these programmatic and policy documents.

Several of these documents direct that an ecosystem approach be used in Refuge management. In other words, we must consider the health of the entire ecosystem when managing Arctic Refuge. This concept requires close coordination with other stakeholders. Appendix B describes the coordination and consultation conducted during the planning process, and Appendix C provides a brief description of the national and regional management plans and programs considered during development of this Plan.

1.3.3 Coordination with the State of Alaska

This Plan was developed in consultation with the Alaska Department of Fish and Game (ADFG) and the Alaska Department of Natural Resources (ADNR). The Service routinely consulted with ADFG and ADNR personnel during the planning process, and representatives from these agencies were on the planning team.

ADFG has primary responsibility for managing Alaska's resident fish and wildlife populations. On Refuge lands, the Service and ADFG share responsibility for all fish and wildlife resources and their habitats, and both are engaged in fish and wildlife conservation, management, and protection programs. In 1982, the Service and ADFG signed a Master Memorandum of Understanding that defines the cooperative management roles of each agency and sets the framework for cooperation between the two agencies (Appendix B). The Service and ADFG recommitted to this formal agreement in 2006.

The State of Alaska establishes fishing, hunting, and trapping regulations at the direction of the Alaska Boards of Fisheries and Game. These regulations apply to Federal public lands unless superseded by Federal regulations. If the Service determines restrictions on hunting or fishing are needed, they are implemented through a rule making or through closures or restrictions under 50 CFR 36.42 or through Federal Subsistence Board regulations in 50 CFR 100.10(d)(4).

The State is divided into 26 game management units (GMUs), most of which are further divided into subunits. Management objectives are developed for game populations in each GMU. ADFG management objectives for the Refuge's big-game and fish populations are described in Chapter 4.

ADNR, a key management partner, manages all State-owned land, water, and surface and subsurface resources except fish and wildlife. ADNR's Division of Mining, Land, and Water manages the State's water and land interests in the Refuge, including water rights, navigable waters, submerged lands under navigable waters, and rights-of-way over Refuge lands. The division is also responsible for developing management plans for State lands. Appendix B provides additional information about key State programs.

1.3.4 Coordination with Tribes

The United States has a unique legal and political relationship with Alaska Native tribal governments. The United States recognizes Alaska Native tribes as sovereign governments that are self-governing under Federal law. Under its “trust responsibility” to tribes, the Federal government has an obligation to protect tribal resources and uphold the rights of indigenous peoples to govern themselves on tribal lands. In recognition of this relationship, and pursuant to Executive Order 13175 (November 6, 2000), the Department of the Interior’s Alaska Policy on Government-to-Government Relations (January 18, 2001), and the President’s Executive Memorandum on Tribal Consultation (November 5, 2009), the Refuge has sought to engage in regular and meaningful consultation and collaboration with tribal officials in the development of the Revised Plan. We have consulted with nine tribes having geographic or cultural ties to Arctic Refuge. For detailed information on tribal coordination conducted as part of this planning effort, see Appendix B.

1.3.5 Coordination with Cooperating Agencies

The Council on Environmental Quality (CEQ) regulations (40 CFR parts 1500–1508) and Department of Interior (DOI) NEPA implementing regulations (43 CFR Part 46) require lead agencies to request participation of cooperating agencies early in the NEPA process. Cooperating agencies are any Federal, State, tribal, or local government, including Native corporations, that have jurisdiction by law or special expertise, such as relevant capabilities or knowledge.

Arctic Refuge is surrounded by lands and waters managed by other Federal agencies or non-Federal entities, including State, tribal, and Canadian governments (Map 1-3). We contacted 11 of these agencies and governments to ask whether they would be interested in cooperating agency status. Appendix B provides details about cooperating agency coordination.



1.4 Arctic Refuge Establishment and Purposes

The purposes for which the Arctic National Wildlife Range was established in 1960, and expanded and re-designated in 1980 as the Arctic National Wildlife Refuge, provide the foundation for determining the future conditions of the Refuge, the opportunities it will provide, and related administrative provisions. The Refuge's special values, vision statement, goals, and objectives are rooted in these purposes.

1.4.1 Initial Establishment of the Arctic Range and the Purposes Set Forth

In the mid-1950s, national and Alaskan conservationists and sportsmen embarked on a long, hard-fought campaign to preserve the northeast corner of Alaska, initially referred to as “The Last Great Wilderness” (Collins and Sumner 1953). Concerned by the rapid loss of wildlands in the lower 48 states following World War II, proponents sought to establish a vast ecosystem-scale conservation unit, intended to be unprecedented not only in size, but also in the range of values and opportunities its preservation would perpetuate.

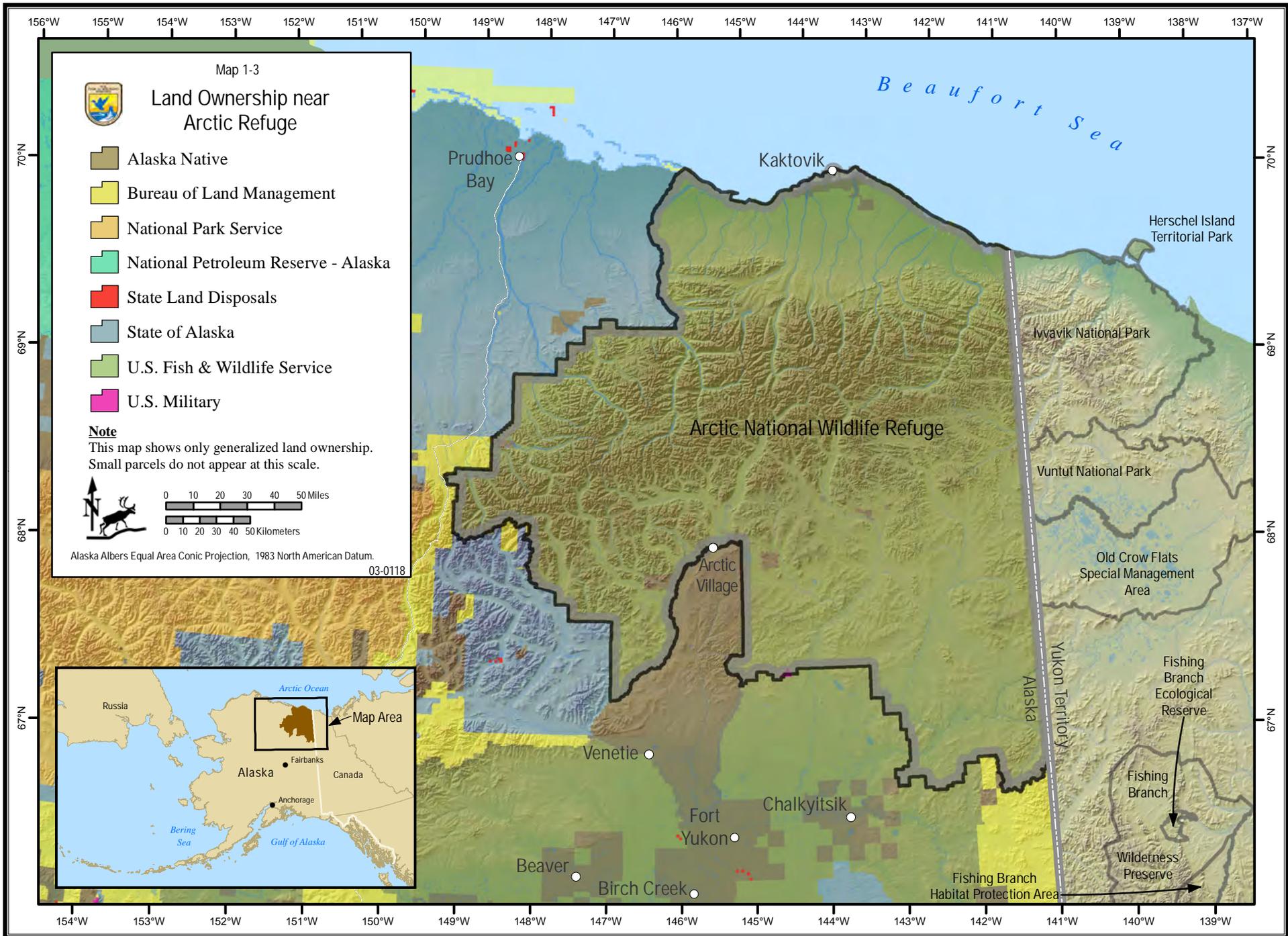
Olaus and Margaret Murie of the Wilderness Society, and other leaders of the effort, decided that status as a national wildlife range, administered by the Service, would be most politically feasible and most likely to protect the area's special values and opportunities. In 1957, the Fairbanks-based Tanana Valley Sportsmen's Association petitioned the DOI to establish the Arctic Range. Their proposal requested perpetuation of the area's “primeval features,” “maintenance of undisturbed ecological conditions,” and “preservation of wilderness conditions” (Tanana Valley Sportsmen's Association 1959). Innumerable conservation, civic, scientific, and sportsmen's organizations joined in lobbying for the area's preservation.

Although there was widespread support for the proposal, there were many opponents as well, and the issue was hotly debated in Alaska and elsewhere. The Alaska Department of Mines, the Anchorage Chamber of Commerce, and both of Alaska's senators were among those that voiced their opposition. Critics argued the proposal would hinder development of the area and limit game management options, among other concerns.

On December 6, 1960, the Eisenhower administration established the 8.9-million-acre Arctic National Wildlife Range through Public Land Order 2214 (Map 1-4). Its brief statement of purpose proclaimed that the Range was established “to preserve unique wildlife, wilderness, and recreational values.” Never before had a wildlife range or refuge been established to “preserve . . . values.” An extensive body of congressional testimony, numerous historic reports and records, and secondary source materials provide understanding of these three founding values (Kaye 2006). These sources provide the context for our mandate to preserve these values. Research in the fields of biology, ecology, and wilderness and recreation management guide our development of policies, practices, and specific provisions for meeting this mandate.

1.4.1.1 Wildlife Purpose

One purpose of the Arctic Range was to protect wildlife and its habitat. The leaders of the campaign to establish the Range intended the word “wildlife” to refer to all indigenous species and that natural behavior, interactions, and cycles would continue without human manipulation. In the words of campaign leader Olaus Murie, the intention was to maintain





Arctic National Wildlife Refuge 1960 - 1980

Map 1-4
Arctic National Wildlife Range
1960 - 1980



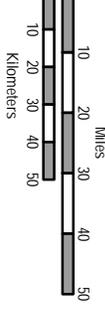
Arctic Range Boundary



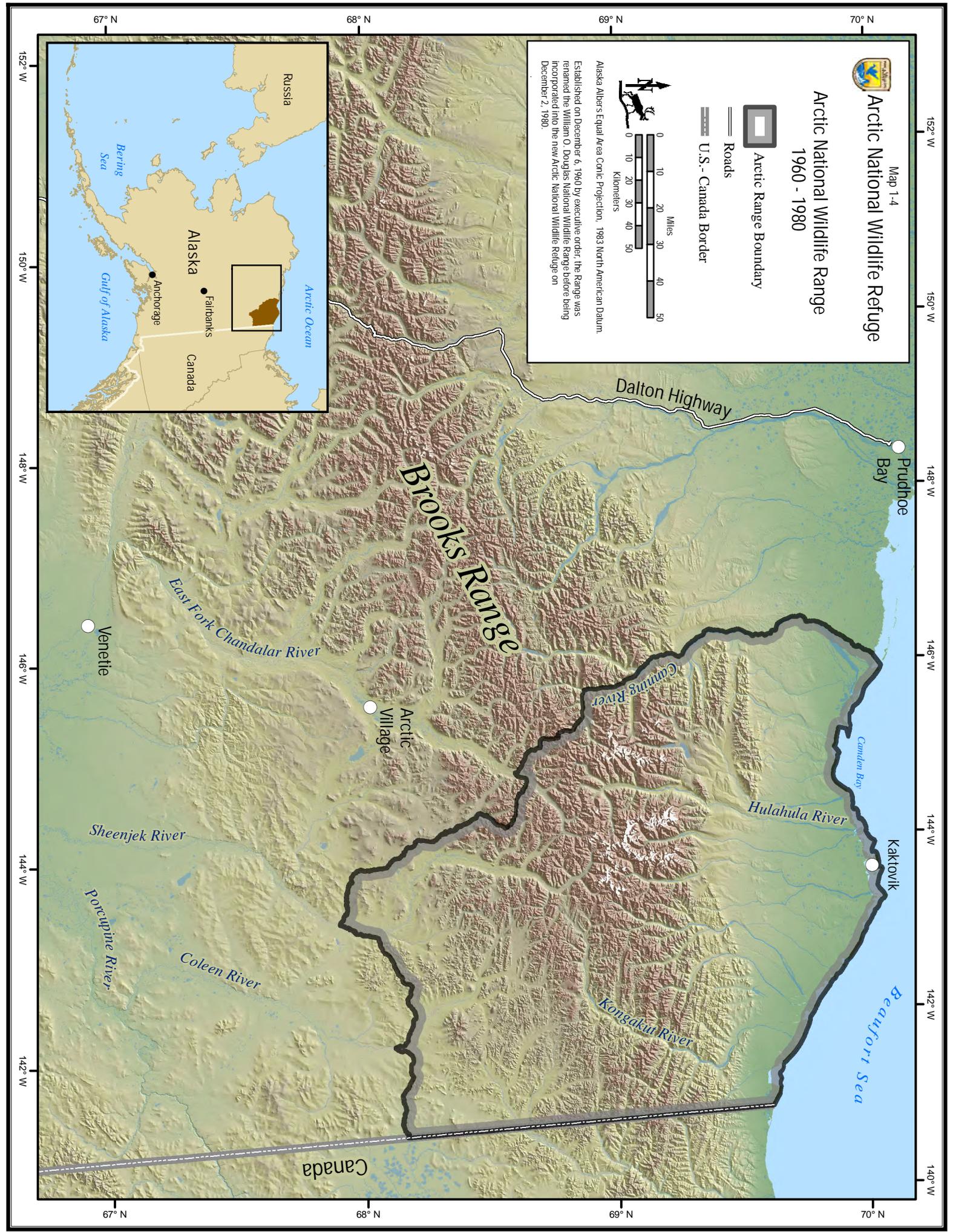
Roads



U.S.-Canada Border



Alaska Albers Equal Area Conic Projection. 1983 North American Datum.
Established on December 6, 1960 by executive order, the Range was
renamed the William O. Douglas National Wildlife Range before being
incorporated into the new Arctic National Wildlife Refuge on
December 2, 1980.



“the whole assemblage of living things which go to make up the rich life of that piece of country” (Murie 1958). In the context of the emerging science of ecology, “wildlife value” emphasized the interrelatedness of all life forms and their environments, and the integrity of the underlying ecological and evolutionary processes. For many, caribou became the symbol of an untrammelled landscape, a wilderness free of the human intent to alter, control, and subjugate nature for utilitarian purposes.

1.4.1.2 Wilderness Purpose

The wilderness purpose of the Range encompassed a range of values—tangible and intangible—including but not limited to preservation of the area’s natural, scenic condition and the wild character of its creatures and natural processes.

The Range was to serve as a natural laboratory—a place to study how nature functions when left alone. The area’s “great scientific value,” as characterized by plant ecologist Leslie Viereck (1959), was that it could serve “as a basis for understanding changes that take place in other areas disturbed by man.” Also inherent in the wilderness purpose was a cultural heritage value. This was to be a living legacy, a remnant of the American wilderness that helped shape our national character and identity and the sense of a “great beyond” that people feared was vanishing. The Range’s wilderness qualities were to be timeless and its benefits enduring.

There are also less tangible, symbolic, and existence values associated with wilderness. The Range was perceived as having value in itself and value to those who will never visit but might find satisfaction and inspiration in just knowing it exists. Its wilderness purpose reflected the values and attitudes toward nature that its founders were concurrently working to place in what became the Wilderness Act of 1964. As Range proponent and Wilderness Act author Howard Zahniser (1956) wrote, “To know the wilderness is to know a profound humility, to recognize one’s littleness, to sense dependence and interdependence, indebtedness, and responsibility.” This was to be a place of humility and restraint for managers and visitors.

1.4.1.3 Recreation Purpose

The Range was intended to offer a special kind of recreation, an authentic wildlands experience of a type increasingly hard to find elsewhere. The recreation purpose provided for a range of activities, including backpacking, river floating, hunting, fishing, wildlife watching, photography, and base-camping. But it was the natural, undeveloped character of the setting that was seen to afford a unique experience. The Refuge’s extreme remoteness, natural condition, and wild character were to provide a degree of physical and psychological separation from the reminders of modern civilization unsurpassed anywhere on American soil. As Range proponent Margaret Murie (1979) wrote, “It was a world that compelled all of our interest and put everything else out of mind.”

The Range was also to be an adventuring ground, the antithesis of the commercial and convenience oriented tourism that national parks were promoting at the time. Many agreed with Olaus Murie that Americans needed areas where enjoyment was earned through effort. Here the sense of freedom, exploration, and discovery were to prevail; the opportunity to encounter challenge and experience true independence and self-reliance were to be perpetuated.

1.4.2 *The Alaska National Interest Lands Conservation Act*

On December 2, 1980, Congress passed ANILCA, establishing new Federal conservation units across the State, enlarging several existing units, and designating wilderness areas and wild and scenic rivers. ANILCA also provided provisions specifying how these areas were to be managed, protected, and made available for public use.

ANILCA added 9.2 million acres to the Arctic Range, designated 8 million acres as wilderness, designated three wild rivers, and changed its name to the Arctic National Wildlife Refuge. Under Section 305 of ANILCA, the Range's original wildlife, wilderness, and recreation purposes still apply to those lands in the former Range. ANILCA also added new purposes that pertain to the entire Refuge. The Refuge's ANILCA purposes are consistent with and complementary to the original purposes for the Arctic National Wildlife Range. ANILCA provided definitions, clarifications, and guidance as to how the Service should carry out the area's original and new purposes.

Section 101(b) of ANILCA summarizes the general intent of all conservation system units in Alaska by stating:

“It is the intent of Congress in this Act to preserve unrivaled scenic and geological values associated with natural landscapes; to provide for the maintenance of sound populations of, and habitat for, wildlife species of inestimable value to the citizens of Alaska and the Nation, including those species dependent on vast relatively undeveloped areas; to preserve in their natural state extensive unaltered arctic tundra, boreal forest, and coastal rainforest ecosystems; to protect the resources related to subsistence needs; to protect and preserve historic and archeological sites, rivers, and lands, and to preserve wilderness resource values and related recreational opportunities, including but not limited to hiking, canoeing, fishing, and sport hunting, within large arctic and subarctic wild lands and on free-flowing rivers; and to maintain opportunities for scientific research and undisturbed ecosystems.”

1.4.2.1 *Arctic Refuge's Purposes*

Section 303(2)(B) of ANILCA set forth the following purposes for Arctic Refuge. ANILCA purposes are shown in italics.

The purposes for which the Arctic National Wildlife Refuge is established and shall be managed 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 coordinating 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*

Supporting the Refuge's original intent to be inclusive of all species, ANILCA Section 102 (17) clarifies that “The term ‘fish and wildlife’ means any member of the animal kingdom . . .”

- (ii) *to fulfill the international treaty obligations of the United States with respect to fish and wildlife and their habitats*

This purpose recognizes the role the Refuge plays in meeting several treaty obligations related to conservation of the fish and polar bears that inhabit both Alaska and Canada, and the migratory birds shared by many nations (Appendix F).

- (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*

ANILCA Title VIII provides a number of provisions to ensure that, consistent with other Refuge purposes, rural residents can continue to use Refuge lands and resources to meet their physical, economic, traditional and other needs (see Chapter 4, Section 4.4.4).

- (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*

This purpose recognizes that protection of water resources is central to conservation of fish and wildlife and their encompassing ecological systems and processes. It establishes an unquantified, but absolute, Federal reserved water right for surface waters and groundwater in the Refuge.

1.4.2.2 Designated Wilderness

ANILCA Section 702 (3) designated eight million acres, most of the original Range, as wilderness. Section 102 (13) of the act clarifies that the term *wilderness* has “the same meaning as when used in the Wilderness Act.” Although ANILCA recognized the unique conditions in Alaska and provided a number of exceptions to the Wilderness Act’s provisions, the basic purposes of the Wilderness Act continue to apply. The Refuge’s designated wilderness is to remain “an area where the earth and its community of life are untrammelled by man.” The area is to remain natural and undeveloped, “retaining its primeval character and influence,” and provide “opportunities for solitude or a primitive and unconfined type of recreation” (The Wilderness Act of 1964),

The purposes of the Wilderness Act are additional purposes of the designated wilderness portion of the Refuge. The purposes of the Wilderness Act are to:

- “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.”*

1.4.2.3 Wild Rivers

ANILCA Sections 602 (39)(42)(43) and 605(a) designated those portions of the Ivishak, Sheenjok, and Wind Rivers within the boundaries of the Refuge as wild rivers pursuant to the Wild and Scenic Rivers Act.

1.5 Special Values of Arctic Refuge

Section 304(g)(2)(B) of ANILCA requires that, prior to developing a Plan, 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.” To meet this requirement, the Service drew upon a variety of sources that reflect the range of values the Refuge holds for the American public. These sources include: documents related to the original and ANILCA Refuge purposes; comments received from the public during previous planning processes; meetings with 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. The following special values summarize the most prominent Refuge values that emerged from examination of these sources.

1.5.1 Wilderness Characteristics

Arctic Refuge exemplifies the idea 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. Embodying tangible and intangible values, the Refuge’s wilderness characteristics include natural conditions, wild character, and exceptional opportunities for solitude, adventure, and emersion in the natural world.

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 a wide range of arctic and subarctic ecosystems, their unaltered landforms, and native flora and fauna. The Refuge is a place of free-functioning ecological and evolutionary processes, exhibiting a high degree of biological integrity, natural diversity, and environmental health. Bordered by four conservation units, the Refuge preserves the core of what is one of the world’s largest trans-boundary protected areas.

1.5.3 Wildlife Values

The Refuge’s diverse fauna includes at least 48 species of mammals, including several high-profile and special-status species: polar and grizzly bears, wolf, wolverine, Dall’s sheep, moose, muskox, beluga whale, and two free-roaming caribou herds. Some species, like the Alaska marmot, occur in few other places. At least 42 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 remote corners of the earth. Of central importance is the ecological context in which these species occur, with their natural behavior, interactions, cycles, and ecological roles continuing.

1.5.4 Rivers

About 160 named rivers and streams, and several hundred lesser waterways, flow through the Refuge. The large number of unmodified, free-flowing rivers is noteworthy. Three are designated as wild—the Sheenjek, Wind, and Ivishak—but the Refuge ensures perpetuation

of the remote, undeveloped, primeval nature of all 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 to its coastal lagoons and islands along the Beaufort Sea, this 19.3-million-acre Refuge—the size of South Carolina—spans six major physiographic zones. Its vastness encompasses wetlands and lakes, warm springs, aufeis fields, pingos, the highest peaks of the Brooks Range, active glaciers, broad valleys, steep river canyons and ravines, waterfalls, fossil beds, caverns and 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 perhaps undiscovered.

1.5.6 Scientific Values

As intended, the Refuge has become a natural laboratory of international importance. The ecological processes, natural diversity, and free function of natural communities in the Refuge provide unsurpassed opportunities for scientific understanding of wildlife, ecology, geophysics, and the changing climate. Numerous long-term investigations provide insights into the natural world, both as it functions naturally and as it responds to large-scale, human-caused influences, such as global climate change.



1.5.7 Native Culture and Subsistence

Arctic Refuge encompasses the traditional homeland of Iñupiat 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 past and present. This land provides opportunities for us all to understand and respect the diversity of human history, culture, and lifeways.

1.5.8 Historic and Heritage Values

While the story of the Refuge's establishment chronicles the emergence of an ecology-based approach to landscape management and protection, it also reveals the nation's desire to perpetuate part of its cultural heritage. The Refuge represents deep-rooted American cultural values about frontiers, open spaces, and wilderness. It is one of the finest representations of the wilderness that helped shape our national character and identity and has always been part of the American psyche.

1.5.9 Recreational Values

The Refuge is renowned for the opportunities it provides for adventure, exploration, independence, and solitude. Whether visitors come to hunt, view, or photograph wildlife, for the challenge of an arduous backpacking trek or 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 apart, free from the distractions of modern civilization. The Refuge remains a place where a sense of adventure, mystery, and discovery still prevails.

1.5.10 Hunting Values

Hunters played a critical role in establishing the original Range, advocating a place for the adventurous pursuit of game “in the tradition of the highest form of the sport” (Murie 1956). This setting rewards those seeking to challenge themselves under primitive conditions. The Refuge's remote expanses can test a hunter's skill, fortitude, and self-reliance. It offers a wilderness experience reminiscent of a bygone era.

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 set foot in the Refuge find satisfaction, inspiration, and even hope in just knowing it exists. The Refuge represents the hope of a past generation that one of the finest remnants of our natural inheritance will be passed on, undiminished, to future generations. 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.

1.6 Arctic Refuge Vision and Goals

1.6.1 *Refuge Vision Statement*

Arctic Refuge staff developed the following statement about their vision for the Refuge's future, drawing upon its purposes, special values, and the unique role it serves in the Refuge System:

This untamed arctic landscape continues to sustain the ecological diversity and special values that inspired the Refuge's establishment. Natural processes continue and traditional cultures thrive with the seasons and changing times; physical and mental challenges test our bodies, minds and spirit; and we honor the land, the wildlife and the native people with respect and restraint. Through responsible stewardship this vast wilderness is passed on, undiminished, to future generations.



1.6.2 *Refuge Goals*

Goals are descriptive, open-ended, and often broad statements of desire for a refuge's future. They convey a purpose but do not define measurable units. Goals for Arctic Refuge are directed towards carrying out the Refuge's mandates and achieving its purposes. Goals are derived from the Refuge's purposes, special values, vision statement, and various other laws, policies, and guidance. The Revised Plan, to be adopted as a result of this planning effort, must work toward meeting all these goals:

- Goal 1:** Ecological processes shape the Refuge, and its management remains essentially free of the intent to alter the natural order, including natural population densities and dynamics, and levels of variation of native fish, wildlife, and plants.
- Goal 2:** The Refuge retains its exceptional wilderness values without loss of natural condition and wild character, and manages designated wilderness consistent with the intent of the Wilderness Act and ANILCA.
- Goal 3:** The Refuge's designated wild rivers flow freely through unaltered corridors, their ecological functions, character, and values are protected, and opportunities for recreation and traditional uses are consistent with the Wild and Scenic Rivers Act and ANILCA.

- Goal 4:** The Refuge provides continued subsistence opportunities to federally qualified rural residents, consistent with ANILCA.
- Goal 5:** The Refuge provides a place for wildlife-dependent and wilderness-associated recreational activities that emphasize adventure, independence, self-reliance, exploration, and solitude while protecting the biological and physical environments.
- Goal 6:** The effects of climate change on Refuge resources are evaluated through scientific research and monitoring, the sharing of traditional knowledge in local communities, and are considered in Refuge management.
- Goal 7:** The Refuge and its partners conduct research and monitoring in support of the Refuge's role as an internationally recognized benchmark for naturally functioning arctic and subarctic ecosystems.
- Goal 8:** The Refuge's cultural resources, historic and prehistoric, are conserved to allow visitors and community members to appreciate the interconnectedness of the people of the region and their environment.
- Goal 9:** The Refuge provides information to diverse audiences, near and far, to enhance their understanding, appreciation, and stewardship of the Refuge and its resources, and reflecting the nation's interest in this place.

1.7 Planning Requirements

Section 304(g) of ANILCA directs that comprehensive conservation plans be developed for each refuge. It also specifies procedures for developing these plans. The following must be identified and described prior to developing a plan for any refuge:

- The populations and habitats of the fish and wildlife resources of the refuge
- The special values of the refuge and any other archaeological, cultural, ecological, geological, historical, paleontological, scenic, or wilderness values of the refuge
- Areas in the refuge suitable for use as administrative sites or visitor facilities, or for visitor services, as provided for in ANILCA sections 1305 and 1306
- Present and potential future requirements for access with respect to the refuge, as provided for in ANILCA Title XI
- Significant problems that may adversely affect the populations and habitats of fish and wildlife

In addition to the stated requirements, plans must:

- Designate areas in the refuge according to their respective resources and values
- Specify the programs for conserving fish and wildlife and the programs related to maintaining the special values of the refuge that are proposed in each area
- Specify the uses in each area that may be compatible with the major purposes of the refuge
- Set forth those opportunities provided in the refuge for fish- and wildlife-oriented recreation, ecological research, environmental education, and interpretation of refuge resources and values, if such recreation, research, education, and interpretation is compatible with purposes of the refuge.

During the planning process, the Service is required to ensure adequate interagency coordination and public participation. Interested and affected parties such as State agencies, Native entities, organizations, and local and national residents who may be affected by decisions in the Plan must be provided meaningful opportunities to present their views. Prior to adopting a plan, the Service will publish a notice of its availability in the Federal Register, make copies available in regional offices of the Service throughout the United States, and provide opportunities for public review and comment.

1.8 The Planning Process

This section describes the process used to develop this draft Plan and Environmental Impact Statement (EIS). The process is consistent with the planning requirements specified in Section 304(g) of ANILCA; the Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act; the Service's planning policy (602 FW 1 and 3); the National Environmental Policy Act (42 U.S.C. 4321-4347); and the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR 1500–1508). The Service used an eight-step planning process to revise the Plan for Arctic Refuge (Figure 1-1):

- 1) Design the planning process (preplanning)
- 2) Initiate public involvement and scoping
- 3) Identify significant issues
- 4) Develop and analyze alternatives
- 5) Prepare draft Plan and EIS
- 6) Prepare and adopt a final Plan
- 7) Implement, monitor, and evaluate the Plan
- 8) Review and revise the final Plan as necessary



Figure 1-1. The Planning Process

1.8.1 *Design the Process*

During the fall of 2009, the Service began reviewing the 1988 Arctic Refuge Plan to determine how it should be revised. The Service found that, in most cases, on-the-ground management actions were meeting Refuge purposes and objectives. However, some management direction needed to be updated. New laws, such as the Refuge System Improvement Act, new regulations and policies, and other changes, such as Federal management of subsistence harvests of fish and wildlife on Alaska refuges, needed to be included in the Plan.

The Service identified all relevant laws, regulations, policies, and other direction that would be considered during revision of the Plan. These are discussed in the legal and planning context sections earlier in this chapter (Section 1.3), and additional detail can be found in Appendix A. The Service formed a planning team to review the available data on Refuge resources and human uses and identified areas that require additional work.

1.8.2 *Initiate Public Involvement and Scoping*

This step informed people that the Plan revision process was beginning and that the Service was soliciting ideas on what issues should be addressed in the Revised Plan. Formal scoping began with publication of the Notice of Intent to revise the Arctic National Wildlife Refuge Comprehensive Conservation Plan and prepare an EIS, which was published in the Federal Register on April 7, 2010 (Vol. 75 No. 66, pp. 17763-17765).



In April 2010, a planning update announcing the Plan revision and seeking comments was mailed to more than 2,000 individuals; local businesses; local, State and Federal agencies; and organizations nationwide. The planning update contained information about the Refuge, the planning process, and some preliminary issues indentified by Refuge staff. The mailing included a comment form so the public could make suggestions or identify other issues or concerns that should be addressed during the revision of the Plan.

An Arctic Refuge planning website was developed during fall 2009 to keep the public informed about planning efforts, involvement opportunities, and decisions. The website was periodically updated with key documents and information about the Plan, including a link to the Notice of Intent, press releases, the April 2010 planning update, and all posters and materials developed for public meetings. The intent was to provide the same information to Internet users as to those people attending meetings or receiving mailings. Through the website, the public could request inclusion on the Plan mailing list or submit an electronic version of the April comment form.

Eight public open house meetings were held—five in communities adjacent to or within the boundaries of Arctic Refuge; one in Washington, DC; one in Anchorage; and one in Fairbanks (Table 1-1).

Table 1-1. Location, dates, and attendance of public meetings

Community	Meeting Date	Attendance
Fort Yukon	April 20, 2010	59
Arctic Village	April 26, 2010	32
Venetie	April 29, 2010	56
Washington, DC	May 4, 2010	44
Anchorage	May 11, 2010	149
Fairbanks	May 13, 2010	168
Kaktovik	May 20, 2010	26
Barrow	June 4, 2010	12

Attendance at these meetings ranged from 12 to 168 individuals. A total of 94,061 individuals and organizations provided written and oral comments during the scoping process. An independent contractor reviewed, coded, and analyzed the responses over a three-month period during the summer of 2010. Appendix I summarizes the scoping comments.

1.8.3 Identify Significant Issues

The planning team reviewed the issues raised by the public, Refuge staff, other Service divisions and Federal agencies, tribal governments, and the State to identify the significant planning issues to be addressed in the Revised Plan. Significant issues are those the Refuge can control and may be handled differently in each of the alternatives. Sections 1.9 and 1.10 further describe planning issues. Chapter 3 describes the identified significant planning issues in detail.

1.8.4 *Develop and Analyze Alternatives*

After the significant planning issues were identified in August 2010, the planning team met and developed a set of six draft alternatives that would meet the Refuge's purposes and goals and comply with the Service and Refuge System missions. In April 2011, a planning update was sent to interested individuals and to State, Federal, and local government agencies in the affected area summarizing the draft alternatives and announcing the Plan's availability for public review and comment. Chapter 3 describes the six alternatives, and Chapter 5 provides an analysis of the potential environmental, social, and economic impacts of each alternative.

1.8.5 *Prepare Draft Plan and Environmental Impact Statement*

The EIS describes six alternatives (including current management) for managing Arctic Refuge during the next 15 years, or until the next Plan revision. It includes an analysis of the potential impacts of implementing each alternative and a description of management actions that are common to all alternatives. The Service will provide a 90-day public review and comment period on the draft Plan and EIS. During the public review period, the Service will host public meetings in the communities of Anchorage, Arctic Village, Fairbanks, Fort Yukon, Kaktovik, and Venetie; and formal public hearings in Anchorage and Fairbanks.

1.8.6 *Prepare and Adopt a Final Plan*

The planning team will review and analyze all public comments received on the draft Revised Plan and EIS. The draft will be modified as needed, including refining the alternatives and selecting a preferred alternative, after which the Service will develop a Final Revised Plan and EIS. Following a 30-day public review of the Final Revised Plan, the regional director will issue a record of decision (ROD) that describes the alternative that will be implemented and the rationale the regional director used to make the decision. The Service will publish a Notice of Availability in the Federal Register and distribute the Final Revised Plan and ROD to interested parties.

1.8.7 *Implement Plan, Monitor, and Evaluate*

After distributing the ROD and Final Revised Plan, Refuge staff will begin implementing any management changes called for in the Plan (Chapter 6). Monitoring—measuring resource and social conditions to ensure progress is being made toward meeting Refuge purposes, goals, and objectives—is a critical component of management. Monitoring helps determine if management actions are effectively meeting the objectives. The Refuge will use an adaptive management approach in which information gained from monitoring will be used to evaluate and, as needed, modify Refuge management actions.

1.8.8 *Review and Revise Plan*

Service policy directs Arctic Refuge staff to review the Revised Plan annually to assess any need for change in management direction. The Refuge will revise the Plan when important new information becomes available, when ecological conditions change, or when the need to do so is identified during a review. If major changes are proposed, public meetings may be held,

and a new environmental analysis may be needed. The Service would consult with appropriate State agencies, Native governments, and others during future revisions. Full review and revision of the Plan is scheduled to occur every 15 years or more often, if deemed necessary. Arctic Refuge staff will continue to inform and involve the public through the appropriate means, mainly on our website and through community meetings, mailings, and email alerts.



1.9 Planning Issues

The Service defines an *issue* as any unsettled matter that requires a management decision, such as an initiative, opportunity, resource management problem, threat to a refuge resource, conflict in use, public concern, or presence of an undesirable resource condition. In December 2009, Refuge staff began identifying issues. The public identified additional issues at open houses and hearings in villages and communities; through comment forms distributed with the first planning update and available on the Refuge's Plan website; and through visits with village residents and community leaders. By August 2010, 37 issues had been identified for consideration during revision of the Plan.

Some of the 37 identified issues have been, or could be, addressed through existing laws, regulations, or policies. Others were best addressed in the Refuge's goals and objectives (see Chapter 2) and/or through step-down planning (see Chapter 6). Other issues were determined to be outside the scope of the Plan. Those issues that remained were considered significant. Significant issues are (1) issues in our jurisdiction to address, (2) issues for which we can suggest different actions or alternatives, and/or (3) issues that will influence the ROD. These issues were addressed through the development of the alternatives, presented in Chapter 3. The Refuge's role in identifying and analyzing significant issues is to consider objectively a wide range of approaches that could be taken to address each issue.

1.10 Significant Planning Issues

Three planning issues were identified for consideration during revision of the Arctic Plan. The Revised Plan provides Arctic Refuge the opportunity to address the planning issues in a variety of ways (alternatives). The identified issues are discussed in detail in Chapter 3. The environmental analysis presented in Chapter 5 discusses the effects of implementing each alternative approach to the significant planning issues.

