



National Headquarters

1130 17th Street, N.W. | Washington, D.C. 20036-4604 | tel 202.682.9400 | fax 202.682.1331  
[www.defenders.org](http://www.defenders.org)

June 4, 2010

Sharon Seim  
Planning Team Leader  
U.S. Fish and Wildlife Service  
Arctic National Wildlife Refuge  
101 12th Avenue, Room 236  
Fairbanks, AK 99701

Via U.S. Mail and Electronic Mail ([ArcticRefugeCCP@fws.gov](mailto:ArcticRefugeCCP@fws.gov)).

**RE: Scoping Comments for the Arctic National Wildlife Refuge CCP**

Dear Ms. Seim,

We appreciate the opportunity to provide scoping comments for the Comprehensive Conservation Plan (“CCP”) being developed for the Arctic National Wildlife Refuge (“Arctic Refuge” or “Refuge”). Established in 1947, Defenders of Wildlife (“Defenders”) is a national, nonprofit, public interest conservation organization dedicated to the protection and restoration of all wild animals and plants in their natural communities. We represent more than one million members and supporters, including approximately 3,000 in Alaska.

Defenders has been substantively involved in National Wildlife Refuge System policy and individual refuge issues for decades, and we played an active role in the passage of the National Wildlife Refuge System Improvement Act of 1997 (“Refuge Improvement Act”). We have also been actively involved in the formulation of national policy guidance issued since passage of the Act, including policies addressing planning, compatibility, biological integrity, diversity, environmental health, appropriate use, recreational use, and wilderness.

To assist the U.S. Fish and Wildlife Service (“Service”) in the identification of issues germane to the Arctic Refuge CCP, we offer the following comments and recommendations.

**I. THE CCP SHOULD ADOPT THE DRAFT VISION STATEMENT AND DESCRIBE A STRATEGY FOR ACHIEVING IT**

Service policy states that the vision statement and goals laid out in the CCP “will reflect planning unit purposes.”<sup>1</sup> The Arctic National Wildlife Range was set aside in 1960 “for the purpose of preserving unique wildlife, wilderness, and recreational values.”<sup>2</sup> In addition to expanding this area and renaming it the Arctic National Wildlife Refuge, the Alaska National Interest Lands Conservation Act of 1980 (“ANILCA”) added four additional purposes:

---

<sup>1</sup> U.S. Fish and Wildlife Service, *602 FW 3 Comprehensive Conservation Planning Process* (2000).

<sup>2</sup> Public Land Order 2214 (1960).

- (i) to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, the Porcupine caribou herd (including participation in coordinated ecological studies and management of this herd and the Western Arctic caribou herd), polar bears, grizzly bears, muskox, Dall sheep, wolves, wolverines, snow geese, peregrine falcons and other migratory birds and Arctic char and grayling;
- (ii) to fulfill the international fish and wildlife treaty obligations of the United States;
- (iii) to provide the opportunity for continued subsistence uses by local residents; and
- (iv) to ensure water quality and necessary water quantity within the refuge.<sup>3</sup>

The vision statement for a refuge “should focus on what will be different in the future because of our efforts, capture the essence of what we are trying to do, and why. It should be future-oriented, concise, clear, compelling, and give a sense of purpose to our efforts.”<sup>4</sup> Defenders supports the following draft vision statement that the Service put forth for the Arctic Refuge:

This untamed arctic landscape continues to sustain the ecological diversity and special values that inspired the Refuge’s establishment. Natural processes and traditional ways ebb and flow with the seasons; physical and mental challenges test our body, mind and spirit; and we honor the land and its wildlife with respect and restraint. Through responsible stewardship, this vast wilderness is passed on, undiminished, to future generations.<sup>5</sup>

This forward-looking vision reflects the Refuge’s purposes, reaffirms a commitment to protect the Refuge as an intact wilderness for future Americans, and implies a management approach that allows habitats to adapt to changing conditions in the absence of human manipulation. Defenders urges the Service to adopt this statement. We are also generally supportive of the Refuge’s draft goals for stewardship as a framework for achieving this vision, consistent with the purposes for which the Refuge was established and the laws and policies under which the Refuge is administered.

## II. THE CCP MUST CONSIDER AND ANALYZE THE IMPACTS OF CLIMATE CHANGE

The Refuge Improvement Act has been called “the most important statute Congress has passed for the Refuge System.”<sup>6</sup> Prior to its enactment, the National Wildlife Refuge System was the lone system of federal public lands without an “organic” statute.<sup>7</sup> Congress intended the Refuge Improvement Act to fill this void by directing that the primary mission of the Refuge System is “to administer a national network of lands for the conservation . . . of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”<sup>8</sup>

<sup>3</sup> Alaska National Interest Lands Conservation Act, 16 U.S.C. § 668dd, Pub. L. No. 96-487, §303, 94 Stat. 2371 (1980).

<sup>4</sup> U.S. Fish and Wildlife Service, *602 FW 3 Comprehensive Conservation Planning Process* (2000).

<sup>5</sup> U.S. Fish and Wildlife Service, *Arctic National Wildlife Refuge, Planning Update 1* (2010).

<sup>6</sup> Robert L. Fischman, *The National Wildlife Refuge System and the Hallmarks of Organic Legislation*, 29 *ECOLOGY L.Q.* 457-622 (2002).

<sup>7</sup> See H. Rep. No. 105-106 at 3 (1997).

<sup>8</sup> 16 U.S.C. § 668dd(e)(1)(A).

The CCP process is the primary vehicle for ensuring that the Refuge System's conservation mission is met. Under section 7 of the Refuge Improvement Act, the Service must issue a CCP for each refuge at least once every fifteen years, identifying and describing:

- § the purpose for which the refuge was created;
- § the distribution, migration patterns, and abundance of fish, wildlife, and plant populations;
- § the archaeological and cultural values of the refuge; and
- § the opportunities for compatible wildlife-dependent recreational uses such as wildlife photography, environmental education, hunting, and fishing.

In addition, the CCP must identify and describe the "significant problems that may adversely affect the populations and habitats of fish, wildlife, and plants" within the refuge and identify "the actions necessary to correct or mitigate such problems."<sup>9</sup>

Climate change is among the most "significant problems" affecting plants and animals today, and thus the potential impacts of climate change should be a central consideration in the development of refuge CCPs under provisions of the Refuge Improvement Act. As highlighted in Defenders' 2006 *Refuges at Risk* report on refuges and climate change, the need for such analysis is critical for refuges that are particularly vulnerable to climate change, including refuges in Alaska, refuges protecting wetland and grassland habitat in the prairie pothole region, and coastal refuges, which are threatened by rising sea levels. In addition, Secretarial Order 3289, issued September 14, 2009, states that "[e]ach bureau and office of the Department must consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, developing multi-year management plans, and making major decisions regarding potential use of resources under the Department's purview."

The importance of this issue should be reflected throughout the CCP and can be considered in several of the sections listed in the Service's recommended CCP outline.<sup>10</sup> Key sections that should incorporate climate change considerations include:

- § **Legal and Policy Guidance** – Secretarial Order 3289 explicitly directs that climate change be considered in Department planning exercises. This is applicable to the CCP process and should be referenced as a relevant policy.
- § **Planning Issues** – Climate change is expected to place enormous pressure on ecosystems and should be considered as a planning issue in the CCP. Because of its coastal boundary, the Arctic Refuge is particularly vulnerable to coastal storms and erosion resulting from reduced shore-fast sea ice. Other anticipated impacts of climate change include species range shifts, phenological changes, decoupling of species assemblages, hydrological changes, and changes in disturbance regimes.<sup>11</sup> Such impacts could result in dramatically different ecosystem compositions than

---

<sup>9</sup> 16 U.S.C. § 668dd(e)(2)(E).

<sup>10</sup> U.S. Fish and Wildlife Service, *Exhibit 4, 602 FW 3 Refuge Comprehensive Conservation Plan Recommended Outline* (2000).

<sup>11</sup> Intergovernmental Panel on Climate Change, *Climate Change and Biodiversity: IPCC Technical Paper V* (H. Gitay et al. eds., 2002).

currently exist on the Refuge, and planning decisions should be considered in light of this issue.

- § **Geographic/Ecosystem Setting** – In order to develop an appropriate plan for managing the Refuge’s resources, it is important to consider the setting of which they are a part. The climatic conditions of the area play an important part in ecosystem processes, and Defenders recommends providing detailed information regarding current and historic temperature and precipitation, observed trends, and projected future conditions.
- § **Refuge Resources, Cultural Resources, and Public Uses** – In addition to describing the Refuge’s resources and uses, Defenders recommends incorporating information on how climatic changes could affect them. In particular, the CCP should describe potential impacts to priority species (e.g., polar bear, caribou, and migratory birds) and their habitats (e.g., tundra and coastal). Anticipating resource changes is an important part of the planning exercise, as it will help identify the need for management action.

In addition to these sections, Defenders recommends that the CCP address climate change through goals, objectives, and strategies related to wildlife and habitat management, inventory and monitoring, environmental education, and ongoing environmental stressors.

**A. The CCP Should Anticipate Further Climate Changes and Develop Adaptation Responses to both Observed and Predicted Impacts**

Managers of protected lands will face increasingly difficult management choices as the unavoidable impacts of climate change transform landscapes, habitats, and wildlife distribution across the globe. Given the magnitude of ecosystem effects already observed and those anticipated as a result of climate change, it would be inappropriate and ineffective for the Service to attempt to actively maintain the Refuge in its *current* condition. Rather, we urge the Service to emphasize management activities that: (a) maintain or restore the natural biological and abiotic processes necessary for ecosystems to adapt to changing conditions, and minimize Refuge-scale anthropogenic effects and perturbations, and (b) proactively explore management approaches to facilitate the ecological transition of natural systems in response to climate change. The plan should, therefore, have a two-pronged approach that emphasizes the continuation of natural and ecological processes in order to best allow the Refuge’s associated flora and fauna to adapt to a changing climate, and that integrates an ecosystem-based focus with delivery of protection of focal species of concern.

Several wide-ranging species, including polar bears, wolverines, and caribou, are known to be especially vulnerable to the impacts of climate change, and the CCP must clearly address how these species will be managed within the Refuge and across jurisdictional boundaries in order to facilitate their long-term survival; every effort should be made to provide these species with the space and time necessary to adapt to changing conditions. On a Refuge scale, special considerations should be given to protecting these species from anthropogenic disturbance including recreation, hunting, habitat manipulation, pollutants, and displacement from preferred or critical habitat. But the plan must also reflect the interrelatedness and interdependency of Refuges across the region. Addressing climate change impacts as the major threat to future wildlife and natural areas require a system-level approach.

The Refuge should also plan, manage, and partner with others at larger scales to more effectively understand and address the large-scale impacts of climate change. In particular, the Refuge should actively participate in the development of the Arctic Plains and Mountains Landscape Conservation Cooperative and the Alaska Climate Science Center housed at the University of Alaska, Fairbanks.

**B. The CCP Should Outline a Plan to Inventory and Monitor Climate Change-Related Variables and Trends**

Though there is overwhelming scientific consensus that the earth's climate is rapidly changing and that the primary cause is anthropogenic greenhouse gas emissions, much less is understood about the complex effects that a rapidly changing climate will have on ecosystems and wildlife. Defenders believes the Refuge System, including the Arctic Refuge, should develop a comprehensive research and monitoring program to function as an early warning system for climate-induced changes.

The Service is required "to monitor the status and trends of fish, wildlife, and plants in each refuge."<sup>12</sup> Monitoring efforts should track changes in biological resources, such as population size and habitat relationships of indicator wildlife species. There is also a need for monitoring changes in the physical resources of the Refuge, as well as climate variables themselves. Factors to consider monitoring include temperature and precipitation, water levels, salinity of water resources, and extent of sea ice and permafrost. Models generate projections of many of these factors, but it is important that long-term data and trends be recorded to assess the accuracy of those models and contribute to the development of more refined models in the future.

We recommend that the CCP identify and describe specific indicators that will be monitored, explain the reason for selecting these indicators, describe strategies for how to monitor them, and tie monitoring information to management actions. Only through careful and thorough monitoring can the Refuge System be prepared to detect changes and respond using the principles of adaptive management.

**C. The CCP Should Include Climate Change Information in Environmental Education Programs**

Environmental education and interpretation are priority public uses of the Refuge System and, when compatible, support the Refuge System's mission by building public understanding and support for wildlife conservation. According to the FWS Service Manual, recreational uses should provide "an opportunity to make visitors aware of resource issues, management plans, and how the refuge contributes to the Refuge System and Service mission."<sup>13</sup> In its education and interpretation programs and materials, the Arctic Refuge should incorporate information about how climate change is altering the local ecosystem, as well as the national and global implications of those Refuge-scale impacts. The Service is well positioned to educate and inform the visiting public about the climate-driven changes impacting the Refuge and its wildlife, and measures the public can take to help protect them. The Service should develop brochures, interpretive panels, websites, and educational programs that address the vulnerabilities of Refuge resources to climate change.

---

<sup>12</sup> 16 U.S.C. § 668dd(a)(3)(N).

<sup>13</sup> U.S. Fish and Wildlife Service, *605 FW 1 General Guidelines for Wildlife-Dependent Recreation* (2006).

## **D. The CCP Should Address Ongoing Environmental Threats**

The effects of climate change are set to put additional pressure on ecosystems already challenged by habitat fragmentation, invasive species, pollution, overharvesting, and other threats. While natural systems and organisms exhibit a certain level of resiliency in the face of such challenges, the additional pressure of climate change threatens to push them toward thresholds beyond which they will be unable to recover.<sup>14</sup> Examples of the synergistic effects of climate and other stressors have already been documented, and there is evidence that multiple stressors can produce ecosystem change of a greater magnitude than would be expected by simply summing their individual effects.<sup>15</sup> Limiting such stressors serves to reduce pressure on ecosystems and may foster resiliency to climate change impacts. Accordingly, the CCP should initiate a process to define and minimize any foreseeable and manageable stressors impacting wildlife, their health, and their habitats.

## **III. THE CCP SHOULD PRESERVE THE REFUGE'S ECOLOGICAL VALUES**

### **A. The CCP Should Preserve Natural Predator-Prey Dynamics**

Predators play a key role in maintaining ecosystem health and function. Their populations cycle according to dynamic ecological processes that vary with prey availability, weather severity, habitat availability, disease, and human harvest. Prey populations are regulated by these same factors, as well as by predators, which prey on surplus animals and play a primary role in maintaining herd health.

The State of Alaska manages game populations according to the Intensive Management (IM) statute, which dictates that the Board of Game may not decrease the taking of a game population without adopting regulations for intensive management, including predator control or habitat improvement.<sup>16</sup> The sole intent of IM is to manage game for high levels of human harvest; biological diversity and integrity are not driving factors. The state's IM policy can have widespread ecological implications, but these have not been measured and are not fully understood. Predator control in particular is highly controversial, arguably unsustainable, and can have potentially devastating effects on ecosystem function and health.

When preparing the CCP, we urge the Service to carefully consider the potential for IM to be conducted on adjacent state lands and the effects this may have on the Refuge's wildlife and habitat resources. Further, the CCP should consider the Refuge's primary ANILCA purpose "to conserve fish and wildlife populations and habitats in their natural diversity including but not limited to, the

---

<sup>14</sup> CCSP, *Thresholds of Climate Change in Ecosystems*, A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [D.B. Fagre, C.W. Charles, C.D. Allen, C. Birkeland, F.S. Chapin III, P.M. Groffman, G.R. Guntenspergen, A.K. Knapp, A.D. McGuire, P.J. Mulholland, D.P.C. Peters, D.D. Roby, and G. Sugihara], U.S. Geological Survey, Reston, VA (2009).

<sup>15</sup> See Rachel Przeslawski et al., *Synergistic Effects Associated with Climate Change and the Development of Rocky Shore Molluscs*, 11 GLOBAL CHANGE BIOLOGY 515-522 (2005); Bayden D. Russell et al., *Synergistic Effects of Climate Change and Local Stressors: CO<sub>2</sub> and Nutrient-driven Change in Subtidal Rocky Habitats*, 15 GLOBAL CHANGE BIOLOGY 2153-2162 (2009).

<sup>16</sup> AS 16.05.255 Regulations of the Board of Game; Management Requirements.

Porcupine caribou herd...., *polar bears*, *grizzly bears*, muskox, Dall sheep, *wolves*, *wolverines*...migratory birds....”<sup>17</sup>

Consistent with the Refuge’s ANILCA purposes and other federal laws and policies that direct the Refuge’s administration, the CCP should explicitly preclude artificial manipulation or intensive management of wildlife populations to enhance game populations for human harvest. The use of predator control for this purpose should be prohibited in any form, including but not limited to aerial gunning, liberalized bag limits, or liberalized hunting and trapping periods or methods.

## **B. The CCP Should Describe Management Strategies for Sensitive and Wide-Ranging Species**

### **1. Polar Bears**

Alaska is home to two populations of polar bears – the Southern Beaufort Sea population and the Chukchi Sea polar population. The polar bear is one of the largest carnivores in the world, rivaled in size only by the Kodiak brown bear found in southwest Alaska. The polar bear is primarily a marine bear, spending time hunting for ringed and bearded seals and raising young on stable arctic sea ice. The decline in sea ice due to climate change is forcing these bears to spend increasingly more time on land denning and waiting for sea ice to form near shore each autumn.

Terrestrial habitats free of human disturbance for maternal den sites and unobstructed access between den sites and the coast are essential to conservation of the southern Beaufort Sea polar bear population. Preventing adverse modification of the Arctic Refuge’s coastal plain, other North Slope coastal plain areas, barrier islands, river bank drainages, and coastal bluffs that occur at the interface of mainland and marine habitat is key to the species’ survival and recovery because these habitats receive proportionally greater use for denning than other areas.<sup>18</sup> Further, these terrestrial habitats are likely to become ever more important because the predicted, continued loss of arctic sea ice due to climate change is expected to result in an increase in the number of polar bears denning on land in northern Alaska.<sup>19</sup> During recent years, the proportion of dens on land has already increased in relation to dens excavated out on sea ice.<sup>20</sup> Polar bear use of terrestrial areas during the summer and early fall is also expected to increase as climate change causes the distance between the southern edge of the pack ice and coastal denning areas to increase during the summer.<sup>21</sup>

As much as 65 percent of confirmed polar bear dens found on land in Alaska were on bluffs along the coast or on barrier islands. These habitats are especially prone to erosion and other alterations

---

<sup>17</sup> Alaska National Interest Lands Conservation Act, 16 U.S.C. § 668dd, Pub. L. No. 96-487, §303, 94 Stat. 2371 (1980) (emphasis added).

<sup>18</sup> *Id.* at 56067.

<sup>19</sup> S. Schliebe, K.D. Rode, J.S. Gleason, J. Wilder, K. Proffitt, T.J. Evans, and S. Miller, *Effects of Sea Ice Extent and Food Availability on Spatial and Temporal Distribution of Polar Bears During the Fall Open-water Period in the Southern Beaufort Sea*, 31 POLAR BIOL. 999-1010 (2008).

<sup>20</sup> A.S. Fischbach, S.C. Amstrup, and D.C. Douglas, *Landward and Eastward Shift of Alaskan Polar Bear Denning Associated with Recent Ice Changes*, 30 POLAR BIOL. 1395–1405 (2007).

<sup>21</sup> Schliebe et al., *op cit.*

via coastal geomorphological processes arising from climate change.<sup>22</sup> The importance of these habitats, particularly during the summer and fall, is likely to increase with changes in sea ice extent due to climate change. Schliebe et al., for instance, reported that the number of bears using the coastal areas in the southern Beaufort Sea, particularly during the summer and fall, has increased.<sup>23</sup>

The Arctic Refuge is key to the polar bear's survival in Alaska. The CCP should emphasize that the Refuge's coastal plain is a uniquely important area under U.S. jurisdiction for maternal denning use by polar bears. Along the Beaufort Sea coastline of Alaska, polar bear maternal dens are disproportionately clustered in the northeast portion of the state near the border with Canada, i.e., within the coastal plain of the Arctic Refuge. Due to recent sea ice changes, the proportion of dens on land has increased and polar bear denning has shifted eastward along the coastline of Alaska. These two trends strongly suggest that the coastal plain of the Arctic Refuge will become even more important to the survival and recovery of polar bears in the future. Thus, the Arctic Refuge is by far the most critical denning habitat for polar bears of any area under U.S. jurisdiction.

Polar bears are particularly vulnerable to anthropogenic and natural disturbances during denning compared to other times in their life cycle because they are more limited in their ability to safely move away from the disturbance.<sup>24</sup> Amstrup and Gardner have suggested that human perturbations, such as hunting or industrial activities, may have a disproportionately high influence on land-denning bears.<sup>25</sup> Andersen and Aars found that females with cubs have the potential to be heavily disturbed by snowmobiles because they react at long distances, often with profound reactions even though the source disturbance was relatively mild, and that the added stress experienced by the cubs could have negative effects on their survival.<sup>26</sup> They reported that polar bear females and cubs reacted to snowmobiles at a mean distance of 1,534 meters, but that the variation in response distances was large for adult females with cubs, with a 95 percent confidence interval of 508 meters to 2,768 meters.<sup>27</sup>

Given that the primary threat to the polar bear is destruction or adverse modification of habitat due to climate change and other effects of human activities, there is a pressing need to protect those habitats, particularly within the Arctic Refuge, that are currently essential to the conservation of polar bears.

## **2. Wolverines**

Wolverines are a wide-ranging and low-density species found throughout the arctic and the sub-arctic taiga and boreal forest. The species is highly prized for its frost-resistant fur and, though little is known about this species, it is thought to be vulnerable to climate change and sensitive to human

---

<sup>22</sup> G.M Durner, S.C. Amstrup, and K.J. Ambrosius, *Polar Bear Maternal Den Habitat in the Arctic National Wildlife Refuge, Alaska*, 59 ARCTIC 31-36 (2006).

<sup>23</sup> Schliebe et al., op cit.

<sup>24</sup> Fed. Reg., op cit. at 56063.

<sup>25</sup> S.C. Amstrup and C. Gardner, *Polar Bear Maternity Denning in the Beaufort Sea*, 58 JOURNAL OF WILDLIFE MANAGEMENT 1-10 (1994).

<sup>26</sup> M. Andersen and J. Aars, *Short-term Behavioral Responses of Polar Bears (Ursus maritimus) to Snowmobile Disturbance*, 31 POLAR BIOL. 501-507 (2008).

<sup>27</sup> *Id.* at 503.



disturbance. As warming trends continue to shrink the wolverine's range, protecting this species in the arctic will be increasingly crucial.

We urge that the CCP critically address how this species will be managed and protected into the future. While some research may be needed in the Refuge to understand the size of the population, sex and age ratio, ecology, range, and optimal denning habitat, efforts should be made to avoid invasive research methods. Management considerations that limit disturbance to denning females, including recreation restrictions, should be adopted. Harvest of this species must be closely regulated and monitored, and bag limits and harvest seasons must be adjusted to ensure the species' continued viability both within the Refuge and adjacent to its boundaries.

### **3. Caribou**

Both the Central Arctic and Porcupine caribou herds utilize parts of the Arctic Refuge during a significant portion of their annual cycle. In early summer, the coastal plain of the Refuge is utilized by these herds to graze, calve their young, and escape predators and insects. During the fall, the herds move off towards the southern part of the Refuge where they will rut and spend their winter in the taiga or boreal forest.

Caribou are sensitive to many types of human disturbance including oil and gas development, roads, helicopters, and recreation. For a variety of reasons, caribou are also susceptible to changing climatic conditions. Increased winter precipitation in the form of ice makes foraging difficult; droughts in summer amplify fire severity and kill lichens, a food resource on which caribou are dependent; and increased temperatures favor insects which harass caribou and decrease foraging time.

The revised CCP must address how caribou herds will be managed in the future. Management options must include programs to monitor herd health and changes in behavior or survival. The effects of current and future recreation and human harvest must be closely monitored and, if necessary, regulated to ensure the Refuge's caribou populations are adequately protected.

## **IV. MAINTAIN THE REFUGE'S WILDERNESS CHARACTER**

The Wilderness Act of 1964 defines "wilderness" as follows:

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired

condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.<sup>28</sup>

The wilderness value of the Arctic Refuge was recognized when it was first established in 1960 as the Arctic National Wildlife Range “for the purpose of preserving unique wildlife, wilderness, and recreational values.”<sup>29</sup> This recognition was made four years before the Wilderness Act of 1964 formalized a definition of “wilderness” and twenty years before ANILCA designated any portion of that area as wilderness under the Wilderness Act. The Service has thus far succeeded in carrying out the commitment made in 1960 to preserve these values, as the Refuge is still associated with a treasured sense of wilderness. Defenders urges the Service to continue in this pursuit, and to adjust management approaches where changing circumstances threaten to compromise the Refuge’s wilderness character.

#### **A. The CCP Should Include a Comprehensive Wilderness Review and Recommendation of All Non-Wilderness Areas**

Service policy states that “[w]ilderness reviews are a required element of comprehensive conservation plans” and are conducted every 15 years as part of the CCP or CCP revision process.<sup>30</sup> Defenders, therefore, supports the Service’s intention to comply with the requirement to conduct a Wilderness Review as part of the planning process.

As the largest unit within the Refuge System, the Arctic Refuge is a vast, intact landscape whose component parts are intricately connected to one another. Failure to protect the wilderness values of one part of the Refuge could compromise these values throughout. We strongly recommend that the CCP include a full review and wilderness recommendation of the entire coastal plain and all other areas of the Refuge not currently designated as wilderness. While only Congress can make a wilderness designation, a full review by the Service is a necessary step on the path to permanent protection of the Refuge’s wildlife, wilderness, recreational, and subsistence values for future generations.

#### **B. The CCP Should Include Appropriate Recreational Use and Access Restrictions**

Recreational use of the Refuge is increasing with improved access. While wildlife viewing, backpacking, and rafting are generally considered low-impact activities, recreation does have the potential to significantly disturb wildlife and detract from the wilderness experience valued so highly by visitors to the Refuge. A visitor study conducted in 2008 found that the wilderness experience is one of the characteristics valued most highly by visitors to the Refuge, along with related attributes such as vastness, remoteness and isolation, and a sense of adventure.<sup>31</sup>

The plan’s drafters should carefully consider current and future use of the Refuge and outline appropriate user restrictions, including group size limits and daily visitor limits, when necessary to protect wildlife resources, habitat, and visitor experience. The Service should also identify and

---

<sup>28</sup> P.L. 88-577, 78 Stat. 890. 16 U.S.C. § 1131(2)(c).

<sup>29</sup> Public Land Order 2214 (1960).

<sup>30</sup> U.S. Fish and Wildlife Service, *610 FW 4 Wilderness Review and Evaluation* (2008).

<sup>31</sup> N. Christensen and L. Christensen, *Arctic National Wildlife Refuge 2008 Visitor Study: Characteristics, Experiences, and Preferences of Refuge Visitors* (2010).

consider the species particularly sensitive to recreational disturbance, activities most disturbing to wildlife, seasonal disturbance most likely to negatively impact wildlife, and areas of the Refuge most important for species the Service deems sensitive. The revised plan should consider seasonal closures or restrictions for areas where sensitive species are found and during vulnerable periods such as breeding and parturition.

Access to remote areas is primarily by aircraft, and noise from low-flying planes can compromise the wilderness and wildlife values of the Refuge. When revising the CCP, we urge the Service to develop regulations for aircraft access in the Refuge to minimize disturbance to sensitive wildlife species and Refuge visitors. These regulations should specifically address access limits, establish a system of landing zones, and prohibit “flightseeing” over the Refuge. Where other forms of motorized and mechanized access (i.e., motor boats) are neither traditional nor necessary they should be expressly prohibited.

### **C. The CCP Should Ensure Recreational Game Hunting is Sustainable and Adheres to Fair Chase Principles**

We suggest stringent regulations be developed for all methods of both unguided and guided recreational hunting within the Refuge. Specifically, we suggest that hunting methods employed in the Refuge adhere strictly to the principles of fair chase and ethics.<sup>32</sup> Activities such as bear baiting, herding or chasing with mechanized equipment, or targeting of animals incapacitated by natural or artificial means should be forbidden in the Refuge.

Defenders also has concerns over the use of airplane spotting employed in harvesting game animals, as reported by Alaska Natives and Refuge visitors. The utilization of aircraft to patrol for game does not adhere to the principles of fair chase and unnecessarily increases the level of noise disturbance experienced by visitors and wildlife, thus impacting the wilderness and wildlife values for which the Refuge was established. In order to avoid future conflict between hunters and other user groups, we recommend that the revised CCP close the Refuge to game-spotting aircraft use pursuant to 43 CFR § 36.11(h), which states that “[t]he appropriate Federal agency may close an area on a . . . permanent basis to use of aircraft . . . upon a finding by the agency that such use would be detrimental to the resource values of the area,” and that “[t]he operation of aircraft resulting in the harassment of wildlife is prohibited.” Eliminating the utilization of aircraft for spotting game would improve visitor experience and minimize disturbance to wildlife within the Refuge.

## **V. THE CCP SHOULD INCLUDE AN ASSESSMENT OF WATER RESOURCES**

Adequate and reliable water supplies are critical to fulfilling the purposes of many refuges. Congress recognized the importance of water when it directed the Secretary to “assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the System and the purposes of each refuge,”<sup>33</sup> and “acquire, under State law, water rights that are needed for refuge purposes.”<sup>34</sup>

---

<sup>32</sup> See Boone and Crockett Club, [http://www.boone-crockett.org/huntingEthics/ethics\\_fairchase.asp?area=huntingEthics](http://www.boone-crockett.org/huntingEthics/ethics_fairchase.asp?area=huntingEthics) (last visited June 4, 2010).

<sup>33</sup> 16 U.S.C. § 668dd(a)(3)(F).

<sup>34</sup> 16 U.S.C. § 668dd(a)(3)(G).

The CCP Checklist of Required Comprehensive Conservation Plan Elements calls on the Service to document and describe “water resources including quantity and quality.”<sup>35</sup> The Refuge System’s strategic plan also recognizes that “[w]ater needs are part of ongoing management needs but are an especially vital element to be assessed during planning activities such as with acquisition of new lands or when Comprehensive Conservation Plans are prepared.”<sup>36</sup>

Based on these requirements, Defenders recommends that an appropriate water resources assessment be conducted for the Arctic Refuge. In doing so, the planner and Refuge staff should inventory Refuge water rights and their quantity and quality, document the types and uses of the rights, determine whether those rights are sufficient to meet the purposes of the Refuge, and describe threats to water quantity and quality. This information will help staff to identify water needs that must be met and to anticipate potential problems in water management.

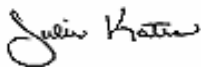
## **VI. THE CCP SHOULD INCLUDE PROVISIONS FOR CONTINUED SUBSISTENCE USE OF THE ARCTIC REFUGE**

Subsistence harvest rights for Alaska Natives and rural Alaskans are protected under ANILCA, which mandates that the Refuge be managed to “provide...for continued subsistence uses by local residents,” consistent with the conservation of fish and wildlife populations and habitats, as well as fulfillment of international fish and wildlife treaty obligations.<sup>37</sup> Defenders recognizes and fully supports subsistence use and accepted traditional harvest practices for federally qualified subsistence users. The plan must clearly outline how harvest rights of federally qualified subsistence users will be preserved into the future, while assuring the protection and long-term viability and diversity of wildlife and their associated habitats within the Refuge.

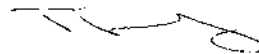
## **VII. CONCLUSION**

Defenders appreciates the opportunity to provide comments. We hope our comments are helpful in developing the CCP, and we look forward to participating in the remainder of the planning process.

Sincerely,



Julie Kates  
Refuge Associate, Federal Lands Program  
Defenders of Wildlife



Theresa Fiorino  
Alaska Representative  
Defenders of Wildlife

---

<sup>35</sup> U.S. Fish and Wildlife Service, *Exhibit 3, 602 FW 3 Checklist of Required Comprehensive Conservation Plan Elements* (2000).

<sup>36</sup> U.S. Fish and Wildlife Service, *Final Strategic Plan for the National Wildlife Refuge System FY 2006-2010* (2007).

<sup>37</sup> Alaska National Interest Lands Conservation Act, 16 U.S.C. § 668dd, Pub. L. No. 96-487, §303, 94 Stat. 2371 (1980).