

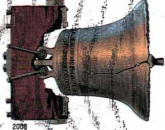
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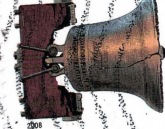
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BLM Alaska State Office
Attn: Coastal Plain Oil & Gas Leasing Program EIS
222 West 7th Ave Stop #13
Anchorage AK 99513-7504

February 10, 2019

BLM Alaska State Office
Attn: Coastal Plain Oil and Gas Leasing Program EIS
222 West 7th Ave. Stop #13
Anchorage AK 99513-7504

RE: Comments on the Coastal Plain and Gas Leasing Program draft EIS

Ms Nichole Hayes, Project Manager;

I am writing to provide comments and preferred alternative recommendations in response to the above referenced document. I reviewed the following sections of the draft EIS; Executive Summary, Section 1 Introduction, Section 2 Alternatives, Section 3.3 Biological Resources (covering vegetation, fish, birds and mammals), Section 3.4.6 Recreation, Section 3.5 Unavoidable Adverse Affects, Section 3.6 Relationship between short term uses and long term productivity, Section 3.7 Irreversible Commitments of Resources, and Appendixes A, B, D, J, and K.

Next I'll share some background regarding this reviewer. I am a trained, and retired, wildlife biologist with thirty years of service at the Washington State Department of Fish and Wildlife (WDFW). Most of those years were spent in the Habitat Program finding solutions that would protect the public's fish and wildlife resources and still facilitate energy development. I retired from WDFW as the Division Manager for Energy Mitigation. I am one of the authors of the National Wind Power Guidelines which was published by the U. S. Fish and Wildlife Service. I was also the director of the Oiled Wildlife Response Team in Washington State.

The EIS identifies significant long term adverse impacts on the resources that the Arctic National Wildlife Refuge was established to preserve. Those resources include fish, wildlife, and their unique habitats in addition to associated recreational opportunities. Predicted reductions in both density and diversity of wildlife species are discounted in the document by making comparisons to global population trends and the unbelievable and erroneous expectation that displaced wildlife will simply move into adjacent habitats. If those adjacent habitats are suitable for displaced wildlife it is likely they are already occupied, creating further displacement and intensifying inter and intra species competition (EIS p. 3-95). Simply stated, displacing wildlife from existing habitats and removing valuable habitat coupled with direct mortality through human/wildlife interactions and unintended oil spills will all result in less wildlife now and in the future.

Even the mitigation measures proposed to address those adverse impacts are mostly ineffective or only marginally effective. For example, areas with the "No Surface Occupancy" designation can still be disturbed and developed. That designation has exceptions for barge landings, docks, pipelines, roads, and stream crossings (EIS p. 3-100). Even high value near shore marine lagoon and barrier island

habitats that are important for migratory birds and polar bears are subject to barge landing facilities, docks, spill response staging, storage areas and pipelines (EIS p. 2-7). In addition, an undetermined number of seawater treatment plants will be built along the coast (EIS p. B-16). The proposed timing limitations are also inadequate. Timing limitations proposed for caribou calving would provide negligible protection for birds (EIS p. 3-102), and are especially ineffective for protection of staging geese. In addition spill response activities including soil movement associated with containment would occur without timing or setback limitations (EIS p. 3-85).

Lease stipulations were included in the evaluation as measures to minimize impacts on non hydrocarbon resources. Unfortunately, even the most protective stipulations identified in the document are unreliable. All lease stipulations are subject to future waivers, exemptions, and modifications as authorized by the BLM Authorized Officer during project construction and operation (EIS p. 2-3 and Table 2-2). This flexibility makes the lease stipulations unreliable and ineffective measures to evaluate or reduce environmental impacts. The BLM Authorized Officer will be placed in a nearly impossible position, the Officer will need a wide range of expertise in order to understand the environmental, subsistence and cultural implications of contractor requests to exempt or modify measures that were originally developed to protect the full range of resources in the Arctic Refuge. In addition the Authorized Officer must conduct business in a remote setting while being subjected to pressure from lease holders, contractors and their political supporters. Without monitors that have the authority to stop work and immediately correct construction methods and without unprecedented protection from economic and political pressure the Authorized Officer's ability to protect resource values in the Arctic Refuge will be severely compromised.

Other unmitigated impacts on fish and wildlife are described below:

Habitat loss would peak during the construction phase but would not diminish with subsequent phases (EIS p. 3-93). Habitat removal will result in long term adverse impacts on fish and wildlife. The fifty to eighty five year life expectancy of the project coupled with the slow growth conditions associated with arctic environments ensures long term adverse impacts. Additional adverse long term impacts on fish and wildlife are probable because main roads built to support the construction and operation phase will likely never be reclaimed (EIS p. 3-95).

The proposed lease area includes habitats that are used at some time by three of the four herds of barren ground caribou that exist in Arctic Alaska (EIS p. 3-104). That level of overlap in herd use area places almost the entire barren ground caribou population at risk of adverse long term impacts from oil and gas development. The total area of disturbance and displacement for caribou exceeds 633,000 acres (EIS p. 3-112), if the surface disturbance is limited to 2000 acres. The 2000 acre surface disturbance limitation does not include gravel quarries (EIS p. 3-101). Habitat loss is a serious unmitigated issue but so is displacement. Existing calf survival data shows lower calf survival in years where a higher proportion of the calves were born off the Coastal Plain (EIS p. 3-114). The countries that signed the International Porcupine Caribou Herd Agreement committed to conserving the herd and protecting its habitat to avoid irreversible damage or long term adverse effects (EIS p. D-2). The oil and

gas development proposal as described in the EIS seems to conflict with the intent and objectives of that agreement.

Bears, including both polar and grizzly will be killed if necessary to protect life or property (EIS p. 3-113). Polar bear are listed as threatened under the Endangered Species Act (EIS p. 3-124) and their numbers are declining locally (EIS p. 3-125). Polar bears den in the project area with greater frequency than would be expected based on available habitat (EIS p.3-127). Fifty four percent of the known polar bear den sites on the Coastal Plain are located in areas that were identified as areas with high potential for hydrocarbon production (EIS p. 3-134). Under all action alternatives future oil and gas activities would increase the level of human-bear interactions (EIS p. 3-140). Measures that will prevent or compensate for adverse impacts on both grizzly and polar bears are needed to satisfy the standards of the ESA and to meet our country's obligations to protect polar bears, den sites, and their habitats that is embodied in the International Agreement on the Conservation of Polar bears.

High use impacts on avian and terrestrial wildlife species described at the airport in Deadhorse are likely to be repeated at the airports developed on the Coastal Plain (EIS p.3-98). Over three hundred thousand snow geese use the Coastal Plain for feeding and staging prior to their fall migration. They are highly susceptible to disturbance from aircraft up to eight miles away. Impacts from aircraft would occur during all development phases and would be extensive in geographic scope (EIS p. 3-98). No mitigation measures to eliminate or compensate for these acknowledged adverse impacts are discussed.

Dust impacts will smother vegetation and reduce wetland functions in addition to introducing pollutants (EIS p. 72). Ninety-six percent of the program area is classified as wetlands or waters of the United States (EIS p. 3-68). The program area is largely undisturbed and wetland structure and function are intact. Tundra and wetland impacts can still be measured up to twenty five years after disturbance (EIS p. 3-70).

The document reports that direct aquatic habitat impacts would be adverse and long term (EIS p. 3-79). But there is no discussion or evaluation of potential water crossings beyond bridges that are commonly used, like culverts and low water crossings. The EIS fails to assess impacts associated with those other crossing options. It also fails to evaluate proper culvert sizing, streambed stability, fish passage solutions or the substantial aquatic habitat impacts that occur both upstream and downstream from those undesirable stream crossing methods.

The risk of oil spills during the project life exceeds 100 percent. Experience on North Slope oil fields confirms three spills larger than 100,000 gallons (EIS p.3-62). Cumulative impact analysis predicts 34 spills of approximately 16,313 gallons (EIS p. 3-65). Recent history and impact analysis confirms the significant potential for uncontrolled release of oil onto the lands and waters of the Arctic Refuge, if this oil and gas development project proceeds. Several hundred thousand breeding and non-breeding birds use the program area during the short arctic summer (EIS p. 3-85). This concentration of migratory birds from all across North America represents a very high impact risk from spilled oil. The EIS acknowledged the potential for significant adverse impacts on birds but suggests no effective prevention measure (EIS p. 3-99). In spite of the message in the Dawn dishwashing commercial on TV, survival rates for birds and

marine mammals impacted by spilled oil is very low, even under perfect working conditions. The difficulty of collecting impacted individuals in arctic conditions coupled with the lack of direct access to support facilities and volunteers for washing and rehabilitation will further reduce the already low survival rates.

Considering the high risk to migratory birds through habitat loss, direct and indirect impacts, and the devastation of unanticipated oil spills, all of which will result with any of the action alternatives, it is disappointing that the EIS does not address the implications of failure to comply with the letter and intent of the habitat protection or take prohibition included International Migratory Bird Treaty Act of 1918.

In addition to the above issues, the EIS is deficient because it evaluated a very limited range of alternatives and fails to identify mitigation or restoration measures that will prevent or restore the significant, long term adverse impacts on publically owned non hydrocarbon resources. The range of consideration for the action alternatives is limited to only those that maximize the opportunity to exploit the hydrocarbon reserves on the Coastal Plain. All of the action alternatives contemplate leasing all of the areas with high potential for hydrocarbon production. The number of acres to be disturbed is even the same in each action alternative. The difference seems to be the source of the surface disturbance. Surprisingly, Alternative D, which is identified as a caribou protection alternative, includes more road mileage and more satellite drill pads than the alternatives which claim to have fewer restrictions (EIS p.B-23). The EIS needs a broader range of action alternatives. There should be at least one action alternative which involve less than full exploitation of the hydrocarbon reserves, and there is no discussion or evaluation of waiting for future technological advancements in oil extraction that would allow hydrocarbon recovery without any surface disturbance.

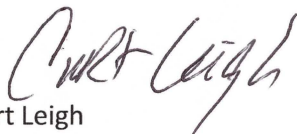
The economic evaluation in the EIS is also deficient. It considers a very limited range of non oil development economic topics. Even though the EIS identifies a recent increase in tourism (EIS p. 3-148), it fails to project lost tourism jobs or economic activity related to tourism through the fifty year project life. Existence values, future recreational values and other passive use values were specifically excluded from any economic evaluation (EIS p. 3-239). The values of undisturbed arctic habitats, which cannot be recreated even with a substantial budget, are not considered.

Based on my review of the Coastal Plain and Gas Leasing Program draft EIS, Alternative A is the only alternative that meets the intent of our International Treaties to protect caribou, polar bears and migratory birds. It is also the only alternative that actually protects the resources that the Arctic National Wildlife Refuge was established to preserve. Those resources include subsistence hunting, fish, wildlife, and their unique habitats in addition to associated recreational opportunities. Alternative A is identified as the only alternative without significant restrictions on subsistence uses and needs for the community (EIS p. I-7) and the only alternative without cumulative impacts from hydrocarbon spills (EIS p. 3-65). Considering the limited range of alternatives that were evaluated and the protection provided to resources that belong to the American people, Alternative A seems to be the only appropriate option.

The EIS proposed to exclude Alternative A from consideration because the authors conclude it does not meet the objectives of the Tax Act, PL 115-97. International treaties that are confirmed by the U.S. Senate and signed by the President supersede laws passed by the federal government. Compliance with the intent of our treaties should receive greater consideration in the EIS and they should receive a higher level of consideration than a tax reform or spending bill that can be changed as soon as a new Congress is elected.

I hope these comments help you and your staff to make a recommendation that continues to provide long term protection for the unique resources and undisturbed habitats that warranted the creation of the Arctic National Wildlife Refuge. The Arctic National Wildlife Refuge was established in 1960, "for the purpose of preserving unique wildlife, wilderness, and recreational values". Please help ensure that purpose is achieved, our treaty obligations are kept, and the undamaged resources in The Arctic National Wildlife Refuge are available for the enjoyment of our grandchildren's grandchildren.

Thank you for your attention in this matter.



Curt Leigh