

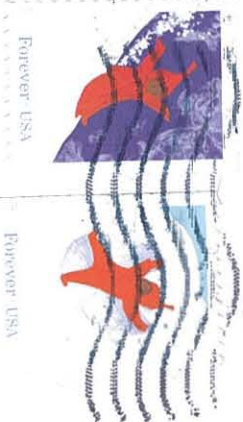
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Via email: blm_ak_coastalplain_eis@blm.gov

SCOPING COMMENTS ENVIRONMENTAL IMPACT STATEMENT
ARCTIC NATIONAL WILDLIFE REFUGE
COASTAL PLAIN OIL AND GAS LEASING

For the record, I am opposed to oil and gas leasing on the Coastal Plain due to the negative consequences. I support a **NO ACTION ALTERNATIVE**. Below my scoping comments state what should be covered in the EIS. BLM must use all the best available science.

1.0 The Process

- 1.1 Passing oil and gas leasing on the coastal plain (section 20001) as part of the Public Law 115-97 2017 Tax Cuts and Jobs Act was a very sneaky tactic. Thus, the decision to lease was not discussed on its own merits. A full, fair and open debate was avoided because it was a hostage to the larger forces advocating for the tax changes. And basically it was jammed into the \$1.5 billion tax bill as a way to lock up Senator Lisa Murkowski's vote on the tax bill. But it also reflects the desperate desire of drilling advocates to act before the political landscape shifts. Senator Murkowski openly admitted this. This sneaky tactic is probably the **ONLY** way that it would pass.
- 1.2 The EIS process is being fast tracked in an unrealistically condensed timeline. This streamlined procedural measure will backfire on the administrations as it opens up the process to litigation. The EIS review may circumvent existing laws and procedures. Agencies will find it difficult to complete review and analysis for this complex issue. It is unknown if an area-wide sale will be offered or smaller blocks.
- 1.3 The US Fish and Wildlife Service needs to prepare a compatibility determination to see if PL 115-97 is compatible with the four other main purposes of the Refuge.
- 1.4 Under the current Arctic National Wildlife refuge Comprehensive Conservation Plan, PL 115-97 is not allowed. This needs to be acknowledged and dealt with.
- 1.5 PL 115-97 limits the surface development to 2000 acres for production and support facilities. But these acres could be spread out throughout the whole coastal plain. Oil reserves could be scattered in multiple pockets across the refuge. Indeed this is suggested by the USGS Survey Fact Sheet 0028-01. The effects from roads,

pipelines, airstrips and other infrastructure not covered by the 2000 acre limitation extend far beyond the physical footprint itself. The effects are far-reaching and complex. **BLM must identify the facilities included in this 2000 acre limitation and where most probably the leasing will occur. How will this limitation be implemented and enforced.** The specifications to each potential 400,000 acre lease sale must be included in each alternative and analysis.

- 1.6 Oil and gas development need a lot of water and a lot of places to dispose of the waste water. BLM must list all potential water sources and analyze the impacts to those hydrological systems and in accordance with Refuge law and planning.
- 1.7 BLM should conduct a Health Impact Assessment using baseline data with projections of impacts from industrial development on human health.

2.0 Lack of American Public Support for Leasing: Large Majority Opposed

In October 2017, the Yale Program on Climate Change Communication did a public poll. 70% of American voters opposed drilling, which is 4 to 1 opposed. This included 84% Democrats, 64% of Independents, and 52% of Republicans opposed. Only 18% of Republicans strongly supported drilling.

Recently, the Hart Research Association poll showed two thirds of Americans opposed drilling. This was 71% of unaffiliated voters, 58% of independents

Furthermore, 119 investors representing \$2.52 trillion in assets under management oppose the leasing. On May 14, 2018 they sent a letter to 100 oil and gas companies and the banks that fund them to not initiate any oil and gas development in the Refuge coastal plain. Capital investments in Refuge leasing would be an irresponsible business decision at a time when the world is transitioning away from fossil fuels. Corporations, governments and investors are developing business plans that assume a 2 degree Celsius climate risk scenario. Financial regulators, analysts and other experts have also endorsed the importance of climate risk analysis, noting that a carbon budget consistent with a 2 degree C target will render most fossil assets unburnable. An oil company or bank that supports drilling faces enormous reputational risk and public backlash.

3.0 Coastal Plain Leasing Revenue Figures Inflated

The administration and the Alaska congressional delegation stated leasing revenues to the US Treasury over the next 10 years would be \$1 billion to 1.8 billion. These were hyped figures to pass the tax bill. Nothing could be further from the truth especially since the state of Alaska would get 50% of the revenues. At the most, the yield would be \$37.5 million

This figure is based on the leasing revenues on other places in the North Slope. In the NPR-A since 1999, 5.6 million acres have been leased for a total of \$281 million. Extrapolating from those leasing revenues, the high average was \$50 per acre. Even that is a pretty high estimate. The recent Alaska state oil and gas sale on the North Slope between the NPR-A and the Arctic Refuge went at \$28 an acre. This figure better reflects the current market evaluation. Plus the \$37.5 million extrapolated figure assumes all 1.5 million acres of the coastal plain will receive bids. That is implausible.

4.0 Consideration of the Agreement Between the Government of Canada and the government of the United States of America on the Conservation of the Porcupine Caribou Herd (PCH)

- 4.1 This treaty agreement on the conservation of the PCH was designed to protect the herd from damage to its habitat and migration routes. The Parties agreed that the herd is a unique and irreplaceable natural resource of great value. Each generation should maintain, use, and conserve for future generations. The Parties recognize the importance of habitat areas such as calving, post-calving, migration, wintering and insect-relief. This requires good will among landowners, users, and wildlife managers to conserve according to ecological principles. A Porcupine Caribou Management Board was formed under the treaty to give advice and make recommendations to the Parties.
- 4.2 Treaty objectives are to conserve the herd; conserve the customary and traditional use; international coordination, cooperation and communication.
- 4.3 Process for activities that are likely to cause significant long term adverse impacts on the PCH or its habitat under the agreement:
- Activities require both Party's approval,
 - Subject to an impact assessment and review consistent with domestic laws,
 - Notification of one country to the other country,
 - The parties must be given an opportunity to consult prior to the final decision, and
 - May require mitigation.
- 4.4 The EIS needs to consider if the above has happened in accordance with the treaty. Did the United States notify Canada officially? Does the US EIS process under NEPA qualify as an impact assessment? Has Canada agreed with the decision to lease the 1002 area? Was the Advisory Board notified and recommendations made by them to the Parties? What mitigation measures are being discussed internationally?

5.0 Oil and Gas Leasing Impacts on the Porcupine Caribou Herd

5.1 Calving and post calving

The Refuge's Coastal Plain, known as the 1002 area, is the best calving and post calving area for the herd. The Canadian coastal area adjacent has significantly lower quality foraging food than the Refuge. The majority of the calving takes place in the Refuge 1002 area. Of course, a lot depends on whether there is an early or later snow melt as part of spring break up. Most of the calves are born in the first week of June.

The first three weeks the calves are totally dependent on mother's milk. If the cows are in poor condition, then the calves are weakened. The first month there is 25% mortality due to birth defects, poor nutrition, and predators (golden eagles, grizzly and wolves). **Based on biological survey data, calf survival is 8 to 11 % greater if they are born in the 1002 area.** To put it another way, the diet quality on the Canadian coastal plain would substantially increase the calving mortality by 19%. In the last 30 years, only three times have the caribou calved in the Canadian coastal plain.

There is no evidence that calves or cows can compensate later in the summer for poor late June physical condition. If animals are in poor condition in the fall, then pregnancy can be reduced, the age of the first reproductive cycle may be delayed, and winter mortality increases. Central Arctic Caribou Herd research shows that there is a measureable avoidance by cows and calves of a zone within 4 kilometers of roads and pipelines and other infrastructure.

5.2 Impacts from oil and gas leasing

5.2.1. Shifting calving distribution away from the development.

5.2.2 Displacing calving would result in systematic decline in calf survival due to increased risk of predation and decline in accessible habitat quality.

5.2.3 The Porcupine Caribou Herd productivity could be negatively impacted due to their sensitivity to development and their ability to withstand natural or manmade stresses in their ecosystem. See above paragraph in 5.1.

5.2.4 Creation of seismic lines

Three-dimensional seismic surveys require a high spatial density of trails. Seismic exploration can damage vegetation and cause erosion, especially along stream banks. Lines create increased access into the area. The Gwich'in Renewable Resources Board surveys indicated in 2017 that the seismic lines are being used by the caribou and their predators. A concern is increased hunter access means increased hunting. New seismic lines are used more than the old ones.

5.2.5 This is a **Trans-Boundary Issue**. Cumulative Impacts of leasing could affect the Canadian Inuvavik National Park and Vuntut National Park that border the Arctic Refuge. If the caribou calving areas are displaced in the 1002 area, then migration further east into those parks. Will there need to be mitigation to compensate?

6.0 Impacts on Bird Species

6.1 Migratory Bird Treaty Act of 1918

This Act encouraged industries to collaborate with the federal government on minimizing bird deaths. It protected birds without being an onerous burden for industry. However, a new legal opinion within the Department of Interior cancels the bird protections for migratory birds. This roll back means the Act will not be enforced. Now the energy industry can end bird-friendly practices.

6.2 Migratory birds from all 50 states and six continents migrate to the coastal plain each summer. Thousands of white fronted geese and snow geese fly right onto the coastal plain. Leasing infrastructure brings higher-than-normal densities of nest predators due to readily available food supplies. All birds in the arctic breed on the ground in scrapes because there are no vertical structures. Predators then prey on birds, their eggs and young. Reproductive success rate of some bird species in oil field development has been reduced to an extent insufficient to balance mortality.

6.3 The Arctic is the only place some species breed. **Impacts in the Arctic have cascading affects on birds and mammals and the whole ecosystem.**

6.4 A review paper from 2016 combed through all the relevant published research since the 1970s regarding bird densities and roads. The conclusion identified is that reduced bird densities extending 0.5 to 2 miles on either side of a road.

7.0 Industry Interest in Leasing?

Is there any indication that industry will want to lease in the coastal Plain?

For instance, in December 2017, BLM offered 10 million acres to lease in western Arctic in the National Petroleum Reserve but only got a very small percentage of bids. 900 tracts totaling 16,100 square miles were offered. Only 7 tracts were bid on by 1 company. This was the largest ever lease sale in western arctic. Industry just did not show up. That is a black stain on the current administration. The “lease everywhere” approach is a clear indicator that there is simply not market for oil and gas leasing in the arctic. You cannot force drilling where no demand exists.

Currently, there are oil and gas leases on over 15 million acres of federal land with thousands of drilling permits that haven’t even been used. Why shouldn’t the administration policy be to make the producers use those permits first rather than despoil new places.

The oil and gas industry as a business is changing. Hugely expensive ventures can’t compete with the cheap shale oil. Too much oil in the system makes for lower per barrel prices. Nobody seems to want that. The world may be headed toward a flattening of conventional oil demand. Renewable energy and fuel efficiency are gaining ground with their new technologies. A recent Carnegie Institute study has shown with better storage technology, 80% of electrical demand can be met with wind and solar. Oil and gas could make up the 20%.

America has already achieved energy dominance in the world. This is a known fact. The United States achieved global energy dominance under the Obama administration. Decades of federal tax credits and regulatory exemptions led to a drilling frenzy. Over the last 8 years or so, over 36,000 drilling permits in America have been issued. The past year the number of drill rigs has increased by 38% to where at the end of January 2018 there were 1070 rigs. The US is now the leading oil and gas producer in the world. It is among the top 5 nations for natural gas. It is one of the largest exporters of refined petroleum products

To sum it up, leasing in the Refuge as part of the Administration “Lease Everywhere” Policy is not based on logical realities.

8.0 Reduced Federal Agency Oversight –Zero Public Confidence in Environmental Protection

The \$54 Billion in cuts to federal agencies such as EPA, NOAA, NASA, Interior Department itself, means reduced agency oversight. In fact, the current administration is changing the whole federal system. There will be deep cuts in agency budgets. An enforcement agency can’t run without managers. EPA will end up reversing a whole generation of environmental protections. Already EPA data reveals dramatic decreases in enforcement and polluter fees. This includes a drop in agency actions on injunction relief which is the monetary commitment to remediate pollution and to stop it from recurring. The drop in prosecution and litigation means lasting consequences for the environment.

9.0 Climate Change Impacts Must Be Considered

9.1 The Data

The average annual temperature in the Arctic (land above the Arctic Circle) has increased twice as fast as the rest of the world in the last 50 years. Thus, we are seeing climate change stress in the coastal plain. These are issues that affect socio-economic-environmental resources both currently and cumulatively. The depth of analysis of such impacts in the EIS should be thorough because they are significant. Existing scientific information exists to show the significance of climate change with the recently released Climate Science Special Report (CSSR) which is volume one of the Fourth National Climate Assessment (NCA4).ⁱ Chapter 11 is titled “Arctic Changes and their Effects on Alaska and the Rest of the United States.” The term arctic refers to north of the Arctic Circle. The following are data which should be used to assess climate change impacts in the EIS.

- ❖ Key finding with Very High Confidence. The annual average near-surface air temperatures across Alaska and the Arctic have increased over the last 50 years at a rate more than twice as fast as the global average temperature. This variability exceeds the inter-annual variations caused by decadal variations. (p. 303 of CSSR)
- ❖ Especially strong warming has occurred over Alaska’s North Slope during the autumn. In Utqiaguik (formerly Barrow) since 1979 the increased warming exceeds 7 degrees F (3.8 C) in September, 12 degrees F (3.8 C) in October and 10 degrees F (5.5 C) in Novembers. It is very likely that arctic surface temperatures will continue to increase faster than the global mean through the 21st century. (p. 305)
- ❖ Snow cover has significantly decreased in Alaska over the last decade. The May 2016 statewide snow coverage of 372,000 square miles was the lowest on record dating back to 1967. 2015 was the second lowest and 2014 was the 4th lowest. The declining snow cover is expected to continue affected by both anthropogenic forcing and evolving arctic ecosystems in response to impacts. The observed tundra shrub expansion and greening affects melt by influencing snow depth, melt dynamics and local surface energy budget. (p. 310)
- ❖ A key finding with high scientific certainty is that rising Alaska permafrost temperatures are causing permafrost to thaw and become more discontinuous. This process releases additional carbon dioxide and methane and resulting in amplifying feedback and additional warming. The permafrost warming rate varies regionally. The colder permafrost of the North Slope is warming faster than in the Interior. The continued permafrost degradation and the transition from continuous to discontinuous is expected over the 21st century. Alaska’s permafrost contains rich and vulnerable organic carbon soils. A possible significant and potentially uncontrollable release of carbon could provide a lot to the global carbon cycle. (p. 303, 305, 316)
- ❖ Recent measurements that cold season (after snowfall) permafrost emissions are greater than summer emissions has shown that permafrost thaw is occurring faster than models have been predicting due to poorly understood deep soil, ice wedge and thermokarst processes by the models. (p. 315)
- ❖ Permafrost temperatures across the North Slope at various depths ranging from 39 to 65 feet (12-20 meters) have warmed between 0.3 degrees and 1.3 F (0.2.-0.7 C) per decade from 1975-2015. Permafrost active layer thickness increased across much of the arctic

with significant permanent thaw slumping indicating significant ongoing thawing and rapid future thawing. (p. 314)

9.2 Implications for Coastal Plain Resources

Climate Change warming has grave implications for permafrost stability. The coastal plain is underlain by thick and continuous permafrost. Some permafrost extends to depths of 2,000 feet. Besides warming from climate cycles, anything that blocks the flow of cold winter air can cause more melting. This is because roads, buildings and destruction of vegetation do NOT shade the soils from the summer sun. Areas adjacent to sun-warmed bodies of water are prone to thermokarsts. International scientists have established that 20% of an area underlain by permafrost may be vulnerable to thaw-driven collapse i.e. thermokarsts.

Studies must be done to determine the extent of melting permafrost in the leasing area. This will have an effect on the foundations of oil and gas leasing infrastructure.. Mitigation for that must be planned. Also the EIS must consider how much active leasing construction and the footprint of gravel pits and work camps, will cause permafrost melting by the vegetation disturbance, destruction, etc.

The cumulative impacts of greenhouse gas emissions from leasing activities along with emissions of carbon dioxide and methane must be considered. The soils of the far north store almost double the carbon amount circulating in the atmosphere.

Oil and gas development will cause further stress on wildlife that have to cope with climate changes. More of a boreal type climate will evolve bringing boreal animals and vegetation into the area crowding the current wildlife.. What will happen to the current mosses and lichens currently important to wildlife?

10. Impacts on Polar Bears

Polar bears are listed as “threatened” under the Endangered species Act. Three-fourths of the refuge coastal plain is federally designated as critical habitat for polar bears. The South Beaufort Sea polar bear population is feeling a lot of stress. A lot of the young are not surviving past 2 or 3 years old. Female reproduction has been lessened.

Due to ecological changes for the past 30 years polar bears have been denning on land. This has really accelerated in the last 10 years. Two thirds of the Refuge’s polar bear denning habitat is on the Refuge coastal plain based on the number of dens surveyed. Oil and gas development activities disturb them. Their denning occurs during the winter months. This is right when exploration and development are likely to occur. Bear/human conflicts are inevitable.

11. Invasive Plant Impacts

Vegetation disturbance and destruction provide perfect pathways for the establishment of non-native species. These species are commonly called invasive. The negative connotation of the word invasives causes a momentum for entities to want to spray herbicides to control them

Long Coastal Plain Scoping

which causes toxic pollution of land and waters. Then the plants acquire herbicide resistance. The process becomes an endless cycle. We don't want to see this happen in the Refuge.

A study must be done to determine baseline data of the current prevalence of invasive vascular plants in the leasing area and any nearby disturbed areas. Risk assessment from leasing access and infrastructure should be considered. **There must be a mitigation response to these impacts.** Best management practices for workers and construction equipment have to be established and implemented strictly.

In conclusion, the coastal plain is the biological heart for many wildlife species. The Refuge was established to protect the ecosystem. Oil and gas development is incompatible. The public will not let oil and gas development, if it occurs, be business as usual.

Keep me informed of the next steps in this process.

Becky Long

