November 9, 2017

The Honorable Lisa Murkowski, Chair
The Honorable Maria Cantwell, Ranking Member
Committee on Energy and Natural Resources
United States Senate
Washington, DC 20510

Dear Senators Murkowski and Cantwell:

As scientists who have either conducted research in Arctic Alaska or traveled in the Arctic National Wildlife Refuge, we are writing to highlight for you the fundamental importance of fully protecting its 1.5-million acre coastal plain. Based on our experience in the Arctic, we oppose oil exploration, development and production in the Arctic Refuge. Such activity would be incompatible with the purposes for which the refuge was established, including "to conserve fish and wildlife populations and habitats in their natural diversity."

When the original Arctic National Wildlife Range was established in 1960 by the Eisenhower Administration, it was done with the foresight and wisdom to protect an entire ecosystem, both south and north of the Brooks Range, including the rich coastal plain. Decades of biological study and scientific research within the Arctic Refuge have confirmed that the coastal plain specifically is vital to the biological diversity of the entire refuge. Within the narrow (15-40 miles) coastal plain, there is a unique compression of habitats which concentrates a wide array of wildlife native to the Arctic, including polar bears, grizzly bears, wolves, wolverines, caribou, muskoxen, Dolly Varden char, Arctic grayling, and many species of migratory birds. In fact, according to the U.S. Fish and Wildlife Service, the Arctic Refuge coastal plain contains the greatest wildlife diversity of any protected area above the Arctic Circle.

In 2003, the National Research Council (NRC) published a report on the "Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope." Led by Dr. Gordon Orians, University of Washington, this report was prepared by a panel of prominent scientists following an extensive review of the literature and consultations with experts. It remains the best, most comprehensive synthesis of the effects of oil development on wildlife and the landscape of Arctic Alaska. Among the report's "major findings" (Chapter 11) are the following:

- Three-dimensional seismic surveys require a high spatial density of trails. "Seismic exploration can damage vegetation and cause erosion, especially along stream banks."

- The effects of roads, pads, pipelines, and other infrastructure extend far beyond the physical footprint itself, and the distances at which impacts occur vary with the environmental component affected. "Effects on hydrology, vegetation, and animal populations occur at distances up to several kilometers…"

- "Roads have had effects as far-reaching and complex as any physical component of the North Slope oil fields."

- Denning polar bears are among the animals that "have been affected by industrial activities on the North Slope."

- Readily available food supplies in the oil fields attract higher-than-normal densities of predators, which then prey on birds and their eggs and young. The reproductive success rate of some bird species in the developed parts of oil fields "has been reduced to the extent that it is insufficient to balance mortality."

- The spread of industrial activity, especially to the east where the coastal plain is narrower than elsewhere [i.e., the Arctic Refuge], "would likely result in reductions in reproductive success" for caribou.

Although oilfield technologies continue to improve, the NRC's findings are still of concern today. Indeed, proposals that would limit the "footprint" of oil development to 2,000 acres on the coastal plain within the Arctic Refuge are of little value, since those acres may be spread over much of the coastal plain. This would be especially true if oil reserves are scattered in multiple pockets across the refuge, as is suggested by the U.S. Geological Survey (Fact Sheet 0028-01). Since the effects of industrial activities, starting with seismic surveys, are not limited to the footprint of a structure or to its immediate vicinity, it is highly likely that such activities would result in significant impacts on a variety of wildlife in the refuge's narrow coastal plain.

Development of yet another oilfield would further set back efforts to limit the carbon emissions that are fueling the dramatic changes in climate now affecting Alaska. Polar bears—listed as "threatened" under the Endangered Species Act—are already struggling with deteriorating sea ice and increasingly are forced to den on land on the eastern Beaufort Sea coast, including the coastal plain of the Arctic Refuge. In fact, three-fourths of the refuge coastal plain is designated as critical habitat for polar bears, which are highly vulnerable to disturbance due to oil and gas activities.

The NRC report and subsequent work done in Arctic Alaska strongly indicate that the cumulative impact of many seemingly small changes is significant. New development on the coastal plain of the Arctic Refuge, one of the nation's and planet's premier protected areas, will only contribute to these harmful impacts on wildlife. For all these reasons, we oppose oil and gas exploration, development and production on the coastal plain of the Arctic Refuge.

Thank you for your consideration.

Sincerely,

Signatories to this letter are attached

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