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Nicole Hayes

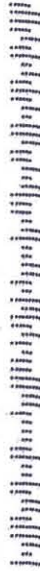
Attn: Coastal Plain Oil and Gas Lease

Prepar- EIS

222 West 7th Ave, Stop #13

Anchorage, AK 99513

99513-750413



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VIA ELECTRONIC MAIL

Nicole Hayes  
Attn: Coastal Plain Oil and Gas Leasing Program EIS  
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**Re: Comments on the Notice of Intent to Prepare an Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program, Alaska.**

June 19, 2018

Dear Ms. Hayes,

I am writing this letter as a resident of Alaska, a shorebird expert for over the past 30 years, and a strong supporter of the wise use of our public lands. Since the late 1980s, I have spent considerable time studying birds of Arctic Alaska, including birds that breed in the Arctic National Wildlife Refuge (Arctic Refuge). During the summers of 1990 through 1993, I worked as a biologist studying the impacts of oil development in the Prudhoe Bay oil fields on waterbird communities. In addition to shorebird research, I studied the now federally listed Spectacled Eider, a seabird that uses the Arctic coastal plain (Warnock and Troy 1992). I did my Ph.D. on the population ecology of Dunlin for which the Arctic Coastal Plain is a critical breeding and migration area. I have published extensively on these birds including being the senior author on the definitive Birds of North America species account (Warnock and Gill 1996). Additionally, I have spent considerable time studying the migration of Arctic shorebirds (e.g. Gill et al. 2009, Battley et al. 2012). I am a member of the Alaska Shorebird Group and recently helped revise the Alaska Shorebird Conservation Plan. I have traveled through the coastal plain of the Arctic Refuge and I have floated several of its rivers, including the Kongakut and the Canning rivers. As such, I have long been invested, professionally and personally, in the ecology and conservation of the Arctic and the Arctic Refuge.

Looking at the entire U.S. Arctic coastal plain, 60% is available or already leased for oil and gas development, while the coastal plain within the 1002 Area of the Refuge comprises 5%. The 1002 Area has been comprehensively protected for decades, and until recently was the only "permanently protected" area of the U.S. Arctic coastal plain. Thus, the 1002 Area is public land of immense national, international, and historical importance, and it merits the strongest possible protection and the highest standards of environmental review. I strongly oppose development in the coastal plain of the Arctic Refuge. I have concerns about the potential impacts of expanding oil and gas development into the 1002 Area on many of the fish and wildlife populations that use the Arctic. Specifically, I have concerns about impacts of oil development in the 1002 Area on shorebird populations and will limit my comments to that group of birds.

With regards to the *Notice of Intent to Prepare an Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program* I ask the administration to adequately describe, quantify, address, and analyze the potential impacts to shorebird populations, as well as thoroughly and rationally explain its final decision to the public. Issues to consider include:

### **Globally, shorebird populations are in decline**

Nationally and internationally, shorebirds are in trouble with many species in decline (Bart et al. 2007, Butchart et al. 2010). In Alaska, 53% of the 38 regularly occurring shorebird species are listed as declining or vulnerable (Warnock 2017).

The 1002 Area of the Arctic Refuge is of global importance to shorebirds supporting at least 14 different breeding species totaling between 100,000 to 360,000 individuals (Brown et al. 2007). At least three shorebird populations breed in the 1002 Area in numbers exceeding over 5% of the global population (in some years) – the Pectoral Sandpiper, American Golden-Plover, and Ruddy Turnstone (Brown et al. 2007).

#### *Pectoral Sandpiper*

- The Pectoral Sandpiper (*Calidris melanotos*) has an estimated global population of 1,680,000 birds (Andres 2016), of which approximately 70% may occur in Alaska (Alaska Shorebird Group 2008, Bart et al. 2012).
- While breeding numbers can vary greatly, in some years, roughly 13% of all Pectoral Sandpipers breed in the 1002 Area of the Arctic National Wildlife Refuge (Brown et al. 2007).
- Pectoral Sandpipers are listed as a U.S. shorebird species of High Concern because of declines in the population (U.S. Shorebird Conservation Plan Partnership 2016) and the species is on Audubon Alaska's Red Watchlist as declining (Warnock 2017).
- Recent tracking studies have shown male Pectoral Sandpipers are extremely nomadic and may stop to breed at Alaskan breeding grounds and then fly further east into Arctic Canada or west into Russia for further breeding attempts (Kempnaers and Valcu 2017).
- On the Arctic Coastal Plain, Pectoral Sandpipers mainly breed and use wet, grass dominated, lower elevation and coastal habitat (e.g. Johnson and Herter 1989, Bart et al. 2012).

#### *American Golden-Plover*

- The American Golden-Plover (*Pluvialis dominica*) has an estimated global population of 500,000 birds (Andres 2016), of which over 50% may breed on the Arctic Coastal Plain (Bart et al. 2012).
- While breeding numbers can vary greatly, in some years, roughly 8% of all American Golden-Plover breed in the 1002 Area of the Arctic Refuge (Brown et al. 2007).
- American Golden-Plovers are listed as a U.S. shorebird species of High Concern because of declines in the population (U.S. Shorebird Conservation Plan Partnership 2016), and the species is on Audubon Alaska's Red Watchlist as declining (Warnock 2017).
- Along the Arctic Coastal Plain, American Golden-Plovers mainly breed in moist, upland habitat (Bart et al. 2012).

## *Ruddy Turnstone*

- The Ruddy Turnstone (*Arenaria interpres interpres*) has an estimated North American population of 65,000 birds (Alaska Shorebird Group 2008), of which approximately 35% may occur in Alaska as breeders (Alaska Shorebird Group 2008).
- While breeding numbers can vary greatly, in some years, roughly 5% of Ruddy Turnstones breed in the 1002 Area of the Arctic National Wildlife Refuge (Brown et al. 2007).
- Ruddy Turnstones are listed as a U.S. shorebird species of Moderate Concern (U.S. Shorebird Conservation Plan Partnership 2016), although trend data for Ruddy Turnstones that use the United States are largely lacking, and at least part of the *A. i. interpres* population is in significant decline (Clemens et al. 2016).
- On the Arctic Coastal Plain, Ruddy Turnstones mainly breed near the coast at sites that are halophytic and sparsely vegetated (like sparsely vegetated dunes) (Bart et al. 2012).

### **Potential impacts of oil and gas development in the 1002 Area**

My comments about the potential impacts of oil and gas development on shorebirds are not meant to be exhaustive, but the general consensus about impacts is clear.

- 1) Roads and traffic impact breeding shorebird populations – Extensive studies from Prudhoe Bay have shown that almost all shorebird species are impacted by oil field roads (and traffic), with all shorebirds (except Red-necked Phalaropes) using roadsides at lower densities “... than undisturbed tundra for nesting and other purposes during the breeding season.” (p. 295, Troy 2000; see also TERA 1993).
- 2) Oil development can artificially increase populations of predators of breeding shorebirds (e.g. Common Ravens, Glaucous Gulls) (Troy 2000, Liebezeit et al. 2009).
- 3) Oil development greatly increases noise, light pollution, probability of oil spills, etc. and these factors can negatively impact shorebirds (e.g. Evans et al. 1993, Schlachter et al. 2007).
- 4) Oil development in the Arctic Refuge increases the regional footprint of ever-expanding development pressure on the Arctic Coastal Plain (e.g. expansion into NPRA to the west, nearshore expansion of drilling in the Beaufort Sea; see Fig. 7.3-2 in Smith et al. 2017) with cumulative impacts on shorebird populations (during breeding and non-breeding seasons).
- 5) Climate change, specifically global warming is exacerbated by burning our remaining oil reserves and shorebirds are being negatively impacted by global warming (Galbraith et al. 2002, Senner 2012, Iwamura et al. 2013).

### **Preliminary scientific needs**

*Landscape-level ecological model.* The agency will preliminarily need to build a conceptual ecological model of the entire Arctic Coastal Plain region of Alaska (and preferably the western Canadian Arctic), which will serve as a basis for designing a monitoring program, detecting impacts, assessing cumulative impacts, and developing adaptive management practices for shorebird populations (especially breeding populations).

*Inventory and monitoring.* The EIS should include an inventory of sensitive shorebird populations and habitats they use, and provide a detailed plan for biological and ecological monitoring. The agency should use the inventory and monitoring program to initially assess the health of biological resources, the location and significance of these resources, and over the long term use this program to analyze adaptive management, restoration, and the effectiveness of management practices in protecting these resources.

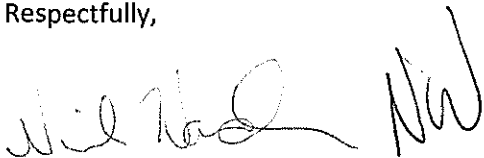
*Research and baseline studies.* The EIS should describe the agency's plan for conducting the necessary research and baseline surveys to be completed prior to leasing tracts in the project area. The taxa and species that require immediate data collection include but are not limited to Pectoral Sandpipers, American Golden-Plovers, and Ruddy Turnstones. The agency should collect additional baseline data for at least these species before undertaking an oil and gas program in the coastal plain.

*Scientific gaps and studies needed.* The agency should identify and address scientific gaps for our understanding of biological and ecological resources on the coastal plain, including for shorebirds. These gaps are articulated in resources such as the North Slope Science Initiative ongoing projects, as well as in conclusions sections in each paper included in the body of literature collected in the 2017 USGS *Summary of Wildlife-Related Research on the Coastal Plain of the Arctic National Wildlife Refuge, Alaska, 2002-17*.

*Climate change.* The agency should evaluate impacts on Alaska Coastal Plain shorebirds and the habitats they use that potentially result from the burning of carbon currently stored in the 1002 Area. As a declining group of birds, shorebirds are particularly sensitive to different types of climate change due to warming, particularly sea level rise (Galbraith et al. 2002, Iwamura et al. 2013) and phenological mismatches (Senner 2012).

Thank you for the opportunity to provide comments on this critically important matter. I am opposed to oil and gas development in the Arctic Refuge. As the BLM develops its Draft Environmental Impact Statement, the agency must adhere to a strict standard of environmental review and address these conservation issues related to shorebirds.

Respectfully,

A handwritten signature in black ink, appearing to read 'Nils Warnock', followed by a large, stylized monogram 'NW'.

Nils Warnock, Ph.D.

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