



Polar Bears in the Arctic National Wildlife Refuge

Polar Bear,
US Fish and Wildlife Service

The Beaufort Sea population of polar bears in Alaska is estimated to be between 2000 and 2500. Based on the analysis of over 30 years of data, scientists found that a bit less than half of the polar bear maternity dens were located on the coastal mainland or on ice attached to the mainland.¹ Of these land dens, about 43% were located within the Arctic Refuge, making this by far the most important onshore denning habitat in the United States.¹

Each winter the pregnant females come ashore and dig dens into the snow, giving birth to one to three cubs in December-early January that weigh 1-2 pounds each and emerge from the den in late March or April when the cubs weigh up to 15 pounds.² Oil companies claim they can reduce the environmental impacts through limiting their activity to winter only. Unfortunately, winter activity coincides with the period when females are within their maternity dens. Should disturbances cause the female to flee the den, newborn cubs will die. In 1985, despite the most intensive monitoring program ever in place for a seismic exploration program, a female polar bear thought to be pregnant with her first litter abandoned her den in the Arctic Refuge after seismic vehicles tracked within 700 feet of it even though regulations required a larger buffer from known dens.³

Individual polar bear dens are extremely difficult to locate and therefore also difficult to avoid disturbing. Scientists have been attempting to document exactly where potential denning habitat is located and how to locate active polar bear dens using infrared cameras.⁶ This work has not yet been proven effective due to the low density of dens, lower body temperatures and the insulation provided by hibernating bears fur. However, even if this technique were eventually successful, polar bears would still be vulnerable.⁷ Eventually, it is the cumulative effect of numerous developments and disturbances that may most distress the population.

Like other species of bears, polar bears exist in relatively small populations and have low reproductive rates.⁴ Consequently, even small population declines can have significant adverse impacts on the population, emphasizing a need for careful management of polar bears.

Concerns with the impact of oil activities on polar bear populations are best described by the IUCN/Species Survival Commission - Polar Bear Specialist Group.⁵ In the section Population and Habitat Threats, the following are listed as primary threats: hunting, petroleum exploration, toxic chemicals, nuclear waste, global warming and trade in polar bear parts. Under petroleum exploration, this group of polar bear experts identified the following potential problems: 1) death, injury, or harassment resulting from interactions with humans; 2) damage or destruction of essential habitat; 3) contact with and ingestion of oil; 4) contact with or ingestion of other contaminants; 5) attraction to or disturbance by industrial noise; 6) harassment (disturbance) by aircraft, ships, or other vehicles; 7) increased hunting pressure; 8) indirect food chain effects due to the impacts of oil and gas related activities on the food web upon which polar bears depend and are a part; 9) mortality, injury and stress resulting from scientific research to determine possible effects of oil and gas activities on polar bears and other species.

Additional problems can arise from oil-industry related spills of toxic chemicals and crude oil in polar bear habitat. One well-known example was the case of the poisoning of a polar bear by antifreeze ingestion, which turned the animal's carcass fluorescent pink, due to a dye it contained. Though the exact source of the antifreeze was unknown (possibly coming from a military installation), such chemicals are commonly used to mark runways and ice roads on the North Slope, and present a hazard to wildlife that may ingest them.⁸

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Alaska Wilderness League
202-544-5205
www.alaskawild.org

Arctic Connections
907-272-1909

Defenders of Wildlife
202-682-9400
www.savearcticrefuge.org

League of Conservation Voters
Education Fund
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www.voteenvironment.org

Natural Resources
Defense Council
202-289-6868
www.savebiogems.org/arctic/

Trustees for Alaska
907-276-4244
www.trustees.org

U.S. PIRG
202-546-9707
<http://www.SaveTheArctic.org>

The Wilderness Society
202-833-2300
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Additionally, polar bears (like the other North Slope carnivores - brown bear, wolves, arctic foxes, and wolverines) may also be attracted to human development because of food, curiosity over novel smells and activities, etc. often leading to an increase in human-caused deaths.^{9, 10, 11}

Because the polar bear is a migratory marine mammal and derives its livelihood from the sea, it is also vulnerable to any spills that may occur in the sea. Oil can accumulate in open-water leads where polar bears concentrate for feeding. There are no effective methods for removing oil from ice-covered waters. Pristine coat condition is necessary for the polar bear to protect against heat loss and any contact with oil is likely to be harmful, if not fatal.¹²

The U.S. is one of five signatories to the 1973 Senate-ratified Agreement on the Conservation of Polar Bears. The other parties are Russia, Canada, Norway, and Denmark (Greenland). Article II of that agreement states that Each Contracting Party shall take appropriate action to protect the ecosystems of which polar bears are part, with special attention to habitat components such as denning and feeding sites and migration patterns and shall manage polar bear populations in accordance with sound conservation practices. Given that the refuge is the most important onshore denning habitat in the U.S. and that exploration and/or drilling in the refuge could likely negatively impact this segment of the Beaufort Sea population, any action that authorizes exploration or drilling would result in a violation by the United States of the Agreement. Polar bears in other regions are under serious threat from the effects of poisons and pollutants¹³ or from the effects of global warming.¹⁴ These threats could also seriously impact the Beaufort Sea population and the best means of protecting the population is through habitat protection.

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