



# United States Department of the Interior



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To: Willow Master Development Plan Supplemental EIS Decision File

From: Craig Perham, Wildlife Biologist, BLM Alaska State Office

Re: Scope of ongoing Section 7 consultations for Willow MDP

After providing the U.S. Fish and Wildlife Service and National Marine Fisheries Service (Services) with their respective BAs, BLM received many public comments on its Draft SEIS, and is still in the process of reviewing these comments and making appropriate revisions to the Final SEIS that BLM intends to publish soon. As part of this review, BLM evaluated whether any of the information provided in public comments could help inform BLM's ongoing Section 7 consultation with the Services.

Among the comment topics was one that suggested that Federal agencies establish causal links between project-specific GHG emissions and climate change-related effects to listed species (with an emphasis on marine mammals, highlighting polar bears) and/or their designated critical habitat.

In regard to GHG emissions and their impacts, BLM has acknowledged and recognizes the following within its BAs and SEIS concerning the Willow MDP:

- GHG emissions contribute to climate change, which in turn causes sea ice loss
- Sea ice loss can impact polar bears and other marine mammals
- Approval of the Willow MDP would result in direct and indirect GHG emissions
- Past, ongoing, and projected future GHG emissions and sea ice loss are addressed, using the best available information, in the Willow SEIS analysis and the BAs, where BLM applied the most current information and standards when analyzing potential climate change impacts to marine mammals.

Based on the comment, the BLM further evaluated whether these impacts from GHG emissions, such as the reductions in sea ice extent, would change our analysis conclusion and alter the approval of the Willow MDP by: (1) identifying if the GHG emissions that would result from the proposed action would cause effects to ESA-listed species or their designated critical habitat in locations beyond the Action Area as currently described; (2) identifying any additional effects within the Action Area to listed species, such as polar bears and ice seals, or to their designated critical habitat, such that an expansion of the ESA BA's effects analysis could be warranted; and/or (3) identifying effects to any additional listed species or designated critical habitat not currently included in the ongoing formal consultations.

In response to the possibility of establishing causal links between Willow-specific GHG emissions and climate change-related effects to listed species and/or designated critical habitat, new text has been

incorporated into the SEIS to acknowledge this potential. However, this mechanism does not connect the impacts from GHG emissions for a specific, individual activity, such as Willow, to a specific area for analysis which could affect the health of a discrete listed species, such as polar bears or ice seals. The scale of the sea ice loss calculation within the comment would be too geographically broad (i.e., lacking precision with respect to any particular area used by listed species) to effectively lead to an increase in the size of the action area. Further, the sea-ice calculation is too broad to quantify potential impacts to listed species already addressed in the Section 7 consultations or their critical habitat with additional precision beyond that which has already occurred.

1) ESA-listed species and their critical habitat that are the subject of Section 7 consultation as a result of the Willow MDP are polar bears, Steller's eiders, spectacled eiders, and northern sea otters for USFWS-managed species. NMFS-managed species that are the subject of Section 7 consultation as a result of the Willow MDP are the bowhead whales, blue whales, fin whales, humpback whales, gray whales, sperm whales, North Pacific right whales, bearded seals, ringed seals, and Steller sea lions. The species that are associated with sea ice and which could potentially be affected by sea ice loss are the polar bear and the bearded and ringed seal. The other species are not known to be associated with sea ice and its use as a "platform" or known to be affected by sea ice reduction; although bowhead whales can transit through sea ice during their spring migration.

Polar bears do utilize sea ice in Arctic waters outside of the Action Area described in the USFWS BA. There is also a Sea Ice unit of designated critical habitat for polar bears that extends beyond the Action Area described in the USFWS BA. Likewise, bearded and ringed seals can be found within and outside of the Action Area and could utilize sea ice within the Action Area. Designated critical habitat for the bearded and ringed seals also extend beyond the Action Area described in the NMFS BA.

In Section 7 consultation, "effects of the action" include "all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action." As stated previously, BLM acknowledges that its proposed action is anticipated to result in a marginal increase in global GHG emissions that would contribute to climate change and, potentially, a marginal seasonal decrease in sea ice extent somewhere in the Arctic. Further, while a suite of polar bear impacts as a result of sea ice loss is known, any generalized calculations of GHG impacts, such as sea ice loss, at this time would not be able to determine precise effects to individual animals and such consequences would not be reasonably certain to occur.

In regard to polar bears and their nuanced relationship with sea ice throughout their range, polar bear researchers in Alaska have not recorded a linear relationship between the amount of sea ice lost and impacts to polar bears. The worldwide polar bear population is comprised of approximately 29,000 individuals distributed across 19 population stocks inhabiting various portions of the circumpolar Arctic region. While the extent to which scientists understand stock-specific population trends, behavioral patterns, and habitat usage varies amongst stocks, the available science indicates that each stock inhabits a distinct area and utilizes that habitat, including associated sea ice, in a unique manner.

For example, Wilson et al. (2016) documented a large reduction (75% of selected habitat) in the summer sea ice in the Chukchi Sea, but there was not an observed reduction in the Chukchi Sea polar bear population (Regehr et al. 2018). Further, there are multiple papers that suggest that polar bears are

adjusting their distribution as a result of sea ice loss, where the general tenet is that polar bears are spending more time on land. This suggests a more complicated response to sea ice loss by polar bears rather than a linear one. This was discussed in the SEIS and BAs.

Similarly, it is not fully known how polar bear prey species, such as ice seals, are responding to sea ice loss and how those effects will impact their availability to polar bears in more than general terms. The linkage between the use of prey species by polar bears and sea ice loss is not sufficiently known. A simple calculation of sea ice loss would not be adequate to further help the analysis of polar bear food resources or seal impacts to a level of precision that has not already been addressed in the SEIS and BAs.

These examples illustrate the lack of a linear relationship between sea ice loss and impacts to polar bears and associated listed species and/or their habitat. Therefore, we lack reasonable certainty that polar bears from the various stocks would be affected by adverse consequences as a result of a marginal reduction in seasonal sea ice extent.

In order to establish a relationship between a marginal sea ice loss and resulting consequences to marine mammals, such as, polar bears, more specificity would be necessary than what currently is available to researchers. Current specificity is limited both spatially and temporally, where more granular information than is currently available would be required about a host of concepts, including but not necessarily limited to:

- Where in the Arctic the reduction in sea ice extent would occur;
- The type of sea ice affected, such as first-year or multi-year ice;;
- Whether that sea ice is utilized by polar bears;
- The reason(s) why polar bears utilizes a particular area of sea ice (e.g., feeding, movement, and/or denning);
- Whether sea ice of sufficient extent and thickness would persist in that area to support continued use by polar bears and their prey.

With respect to ice seals, we would need similar additional, granular information than is currently available to understand the species-specific consequences of a marginal sea ice loss caused by a specific project.

Using polar bear critical habitat as an additional example, we are similarly unable to predict whether a marginal reduction in sea ice extent somewhere in the Arctic would result in consequences to any of the polar bear's designated critical habitat. The Sea-Ice Unit of polar bear critical habitat is limited those Arctic waters under U.S. jurisdiction and is further limited to "Sea-ice habitat used for feeding, denning, and movements, which is sea ice over waters 300 m (984.2 ft) or less in depth that occurs over the continental shelf with adequate prey resources (primarily ringed and bearded seals) to support polar bears." The Sea Ice unit of polar bear critical habitat therefore represents a small fraction of Arctic waters across the circumpolar Arctic and whether any Arctic sea ice estimated to be lost using the commenter's calculation would occur in the designated polar bear critical habitat Sea-Ice Unit is unknown, and any assumptions to that effect would be speculative. Due to the current lack of specificity, both spatial and temporal, in commenter calculations, it would be difficult to correlate a discrete volume of GHG emissions to sea ice reductions in this specific area, but even if we could there is no basis for concluding that such consequences are reasonably certain to occur outside of the Action Area.

2) As explained above, assuming that the proposed action would cause marginal reduction in sea ice to occur in the Action Area is speculative, given the lack of temporal and spatial specificity. BLM has not identified any additional effects to listed species or designated critical habitat within the Action Area

stemming from the proposed action's GHG emissions and finds the existing BAs' effects analysis to be sufficient.

3) A further review of GHG emissions and the resultant reduction in sea ice indicates that these estimates do not suggest any effects to any additional listed species or designated critical habitat. The only USFWS-managed, ESA-listed species that are present in Arctic waters are polar bears, Steller's eiders, spectacled eiders, and northern sea otters. Each of these species and their designated critical habitat are already the subject of the ongoing formal consultation. In addition, NMFS-managed, ESA-listed species that are present in Arctic and Sub-arctic waters (i.e., bowhead whale, blue whale, fin whale, humpback whale, gray whale, sperm whale, North Pacific right whale, bearded seal, ringed seal, Steller sea lion) are also the subjects of ESA consultation. For this reason, BLM reaffirms its "no effect" determination with respect to all other listed species and their designated critical habitat.

In conclusion, the BLM's evaluation of the additional climate change-related information does not alter its list of species or designated critical habitat that could be affected by an approval of the Willow MDP, the BLM's delineation of the Action Area, or the BAs' analysis of effects to any listed species or designated critical habitat.

*Regehr, E.V., Hostetter, N.J., Wilson, R.R. et al. Integrated Population Modeling Provides the First Empirical Estimates of Vital Rates and Abundance for Polar Bears in the Chukchi Sea. Sci Rep 8, 16780 (2018). <https://doi.org/10.1038/s41598-018-34824-7>*

*Wilson RR, Regehr EV, Rode KD, St Martin M. 2016 Invariant polar bear habitat selection during a period of sea ice loss. Proc. R. Soc. B 283: 20160380. <http://dx.doi.org/10.1098/rspb.2016.0380>.*