

JUL 07 2017

Ms. Jody Pellissey, Chairperson
Conference of Management Authorities
c/o Species at Risk Secretariat
PO BOX 1320
YELLOWKNIFE, NT X1A 2L9

Request for Clarification, Species at Risk Committee (SARC) Status Report for Grizzly Bear in the NWT

Dear Ms. Pellissey,

Thank you for your letter of June 11, 2017, requesting clarification of the assessment of grizzly bear in the NWT. SARC reviewed your request and provides further clarification to each of your questions below.

Request:

"SARC cautioned that increases in human-grizzly interactions, leading to human-caused mortality, may become a threat, causing population decline. Can SARC provide further detail on its interpretation of this threat, including

- a) what scale of increase in human-caused mortality (e.g., magnitude and scope) would be expected to lead to a population decline, and
- b) what the likelihood is of this taking place given the NWT's successful management regime for grizzly bears?"

Further clarification from SARC:

a) As a total of the estimated population size of NWT grizzly bears (4,000-5,000), a human-caused mortality rate of less than 1.0% seems likely within the NWT. McLoughlin (2003) calculated 4.9% as the maximum sustainable harvest in optimal habitat where bears have a low age at first reproduction and thus higher net reproduction rate. Where conditions are less than ideal, the sustainable harvest rate drops to 2.8% and, in low-quality habitats where primary productivity is very low (e.g., central barrens of the NWT/West Kitikmeot), that rate drops to 1.1%. Although human-caused mortality within the NWT falls within the lowest of these brackets, the grizzly bears of the North Slave region move freely between this region and the Kitikmeot

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region of Nunavut. Combining the average annual grizzly bear harvest of the Kitikmeot and North Slave regions, an average annual harvest of close to 3% is seen, which exceeds the 1.1% sustainable rate suggested by McLoughlin (2003) for that habitat. Barren-ground grizzly bears, which experience late ages of first reproduction and live at relatively low densities in highly seasonal and low-productivity environments, are also the most vulnerable to over-harvest (see status report p. 106 *Threats and Limiting Factors – Human-caused mortality* for additional information).

b) It is true that grizzly bears in the NWT are subject to consistent and well thought-out management. However, human-grizzly bear interactions appear to be on the rise and while management responses to these interactions may include non-lethal methods of intervention, non-lethal removals are often not effective and management kills of grizzly bears are generally the outcome of conflicts where they occur in the NWT. Regardless of quotas, it appears likely that the need for management intervention, including lethal means of removal, will increase in the future if the increasing trend in human-grizzly bear interactions continues.

Further, although it may seem likely that the number of human-grizzly bear interactions are increasing in step with apparent increases in the grizzly bear population, SARC notes that abundance and trend information is lacking for most of the NWT and that the cause and magnitude of this increase and the northward shift in distribution is not clear. It is plausible that the northward shift in distribution and the apparent increase in population are in fact the result of dispersal and displacement and not representative of a true population increase. It is known that grizzly bear populations are affected when habitat quality declines, for example when the abundance of an important food type decreases. In such cases, grizzly bears will move to different habitat areas where more food is available. Likewise, ecological changes caused by climate change, forest fires, and other kinds of habitat disturbance may cause grizzly bears to seek out better habitat elsewhere. Finally, increased human access to grizzly bear habitat, along with associated attractants such as hunter kills and garbage could be increasing the potential for grizzly bear-human interactions. Traditional knowledge tells us that the presence of a grizzly bear that is not bothering people indicates that the surrounding area has plenty of game and other food, and that the bear itself is healthy and not hungry. If a grizzly bear tries to attack people however, it is thought that it is hungry or that something may be wrong with the bear.

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Request:

"SARC cautioned that increased future resource development and establishment of transportation corridors could potentially pose a significant threat by the removal of a larger portion of effective habitat. Can SARC provide further detail on its interpretation of this threat? In particular, would the scope and magnitude of effective habitat removal that is anticipated in the NWT (i.e., from planned resource development projects and transportation corridors) be expected to lead to population-level declines?"

Further clarification from SARC:

SARC is less concerned about the footprint of future development activities than about the potential for those developments to act as population sinks for grizzly bears. Some elements of human infrastructure have proven useful to grizzly bears, such as man-made trails and seismic lines, which grizzly bears can use to move from place to place. Human camps and dumps can provide sources of food for grizzly bears, with grizzly bear encounters tending to take place in the spring, when grizzly bears are coming out of hibernation.

Grizzly bears prefer areas that are 'open' and have abundant food resources. In the spring, following emergence from hibernation, adequate food sources may be in short supply. During this time grizzly bears scavenge for whatever is available. In addition to scavenging, they may rely on vegetation during this time, heading to locations where they can more easily access vegetation exposed from the snow.

Ultimately, SARC is concerned a grizzly bear's curious and food-driven nature, coupled with the food sources that can be either associated with or made more easily accessible by development projects, could adversely impact grizzly bears. A development project doesn't need to have a huge footprint to become a sink if you have an attractant.

SARC recognizes that in the face of apparent population and distribution increases, an assessment of Special Concern may be difficult to accept. SARC chose to pursue a cautious interpretation of the threats presented in the status report, understanding that the apparent increase being seen in population and distribution is neither understood nor substantiated by evidence across much of the NWT and that their

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inherent limiting biological characteristics make grizzly bears extremely vulnerable to threats and would significantly inhibit their ability to recover from any declines.

Should the CMA wish for a more detailed threats assessment, SARC would be pleased to complete and submit a 'threats calculator' for your consideration.

I hope this satisfactorily addresses your questions and concerns.

Sincerely,



Suzanne Carrière, Alternate Chairperson
Species at Risk Committee

- c. Conference of Management Authorities
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