



SUBMISSION TO THE

NUNAVUT WILDLIFE MANAGEMENT BOARD

FOR

Information: X

Decision:

Issue: Government of Nunavut, Department of Environment- Multiple program updates

Grizzly Bear Harvest and Sampling

- Nunavut represents the northeastern edge of grizzly bear (*Ursus arctos*) distribution in Canada.
- Grizzly bears are listed as Special Concern under the federal *Species at Risk Act* (SARA) and bears are regularly harvested for subsistence, with defense of life and property and sport hunting to a lesser extent. There is a small market for hides and other parts.
- There is an ongoing sample collection program to monitor the geographic distribution, sex, and age composition of grizzly bears harvested in Nunavut.
- Hunters voluntarily submit the lower jaw or whole skull, a piece of muscle, a small piece of the skin with hair (2 cm x 5 cm), and provide kill information (date, location, etc.) to their local conservation officer. Tooth samples are used to determine age of the harvested individuals.
- From 2020 to 2024 a total of 200 grizzly bear harvests were reported, 109 from the Kitikmeot and 91 from the Kivalliq region.
- Grizzly bear harvest is linked to hunter accessibility; in late winter/early spring hunters use snowmachines to access areas further from communities. In summer, ATVs are used to access areas around communities as well as boats to extend hunting off water channels.
- Grizzly bear harvest was concentrated in the western Kitikmeot, in the vicinity of Kugluktuk, Cambridge Bay and along the traditional travel route from the Cambridge Bay to the Bathurst Inlet area. Arviat and Baker Lake were the highest contributors to the Kivalliq region harvest.
- Between 2019 and 2024, the harvest was dominated by a younger age class (subadults) in the Kivalliq region and the proportion of adults in the harvest was 38%, while the proportion of adults in Kitikmeot region harvest was 56%.
- Long-term reported harvest trend of 15 years (2010-2024) shows that in the Kitikmeot region, the number of bears harvested averaged 15 bears annually (range 4–32) and was highest in 2021 (32 bears).
- Grizzly bear harvests in the Kivalliq region have increased since 2008. From 2010 to 2024, the harvest averaged 20 bears annually (range 9–34).
- The sample program contributes to more accurate harvest reporting and to advice on appropriate management actions.

Grizzly Bear IQ Study

- The Government of Nunavut collaborated on an *Inuit Qaujimagatuqangit* (IQ)/Traditional Knowledge study on grizzly bears (Aklak) in the Kivalliq region. The goal of the study was to document local knowledge of grizzly abundance, distribution and ecology and use this information to complement scientific data to inform management practices.
- The research used semi-structured interviews and participatory mapping exercises to elicit narratives of encounters, estimates of spatial distribution and abundance, and knowledge of grizzly bear ecology from Inuit hunters and elders.
- Participants emphasized an increase in the relative abundance of grizzly bears across the Kivalliq region since the beginning of the twentieth century, with rare encounters prior to the 1960s but frequent encounters from the 1990s onward.
- Participants emphasized that grizzly bears were not historically abundant in the Kivalliq, suggesting a range expansion rather than a population in recovery.
- The distribution of grizzly bears was primarily inland, where encounters frequently occurred along lakes and rivers; however, sightings in coastal areas have become more common.
- Grizzly bear densities were calculated from both interview data alone and interview data plus DNA sampling grid hits (Awan et al. 2019) using inverse distance weighting and Empirical Bayesian Kriging (2.88-4.07 bears/1000km²) for a total abundance of 1081-1515 bears in the study area.
- Both estimates are within the 95% CI range estimated previously by Awan et al. (2019) of 2.1-6.1 bears/1000km² and are similar to other studies in similar habitat.
- The socio-ecological context of the Kivalliq is not comparable to other regions in Canada, and study participants emphasized that grizzly bear management policies and practices should be distinctive to the region's context.
- Study participants indicated that harvest levels are sustainable and that the overall population has increased. Participants have linked the population increase to increased human-wildlife interactions.

Wolf Harvest and Sampling

- Enhanced predator management actions are often employed to support recovery of declining caribou herds and has been recommended by the Nunavut Wildlife Management Board in past decisions on some caribou herds (i.e. Bluenose East and Bathurst herds).
- The Department of Environment (ENV) supports Nunavut harvesters through our Support for Active Harvesters program and associated wolf sample collection.
- This program compensates local hunters for harvesting wolves and providing samples and location data. It was initially launched in 2018 in the Kitikmeot Region and was expanded territory-wide in 2019.
- The program provides hunters \$500 per wolf across all of Nunavut, and \$900 per wolf in areas of special concern, such as the Bathurst, Bluenose-East and Dolphin-Union caribou herd ranges.
- In the 2024-2025 fiscal year, a total of \$518,000 in wolf sample collection payments were paid to Nunavut wolf harvesters. This represents the submission of 900 wolf samples, representing both the highest number of wolves submitted under the program, and the largest amount distributed to hunters in a single fiscal year.

- The department examined wolf harvest data from 1,500 wolves killed by hunters within Nunavut between 2018-19 and 2020-21.
- In 2018-19, 146 wolf harvests were reported by 52 hunters in the Kitikmeot, primarily by Kugluktuk hunters.
- In 2019-20, 658 wolf harvests were reported across Nunavut, with 64% of the harvest from Arviat, Baker Lake and Kugluktuk hunters.
- In 2020-21, 699 wolf harvests were reported, with 68% of the harvest from Arviat, Baker Lake and Kugluktuk. In both years, the proportion of juveniles in the harvest declined over time and a relatively small number of hunters contributed a large portion of the harvest.
- Although patterns differed among communities, wolves were generally harvested closer to communities prior to Christmas (generally within 75 km) and further from communities later in the winter, with peak distances in April and May (up to 500 km).
- ENV continues to analyse sample submissions and will provide further updates to co-management partners as final reports are available.

Wolverine Harvest and Sampling

- In Nunavut, wolverines (*Gulo gulo*) occupy almost all areas of the territory and are classified as both a furbearer and a big game animal under the *Nunavut Agreement*. They are an important furbearer in Nunavut's culture and economy.
- Wolverine is also listed as Special Concern under the federal *Species at Risk Act* (SARA).
- Previous research has estimated density from 1.6 to 4.4 wolverines/1,000 km² in the Kivalliq region and 4.14 wolverines/1,000 km² in the Napaktulik Lake area in the Kitikmeot region.
- The Government of Nunavut collects wolverine skulls and kill information to estimate the harvest and to monitor the age and sex of the harvest.
- Hunters submitted skulls and kill information from 691 harvested wolverines between 2018-2019 and 2023-2024.
- Most wolverines were harvested in the Kitikmeot region, in the vicinity of Kugluktuk, while relatively fewer were harvested in the eastern communities.
- Arviat and Baker Lake were the next highest contributors to the total harvest.
- Harvest data shows that 84% of wolverines were hunted with a rifle, while 16% were trapped.
- The harvest was male biased with approximately twice as many males harvested as females with juveniles and yearlings dominating the harvest (63% of the overall harvest).
- The harvest was dominated by younger age classes during the early winter, while the harvest of adults increased later in the winter.
- The spatial distribution, age, and sex structure of the harvest were typical of a healthy population.
- However, the relatively low number of mature females in the harvest is important to note and will continue to be monitored.