

Porcupine Caribou Harvest Management Plan Annual Harvest Meeting 2025

Porcupine Caribou Management Board Recommendations to the Parties February 2025

A. PREAMBLE

In accordance with the Harvest Management Plan (HMP), the Porcupine Caribou Management Board (Board) held the 15th Annual Harvest Meeting in person in Dawson City, Yukon February 11 and 12, 2025. The Board convened the meeting to gather input and to deliberate on the harvest management recommendations for the Porcupine Caribou herd (PCH).

This report presents the Board's recommendations and rationale to the Parties regarding the harvest management zone and associated management actions that should apply to the herd over the coming year. Also included are other related concerns raised during the meeting and the recommendations from the Board regarding those concerns.

B. RECOMMENDED HARVEST MANAGEMENT ZONE AND HARVEST MANAGEMENT ACTIONS

The Board recommends that the PCH be considered in the Green Zone (above 115,000 caribou).

Consistent with the Green Zone harvest management actions (HMP, page 20), the Board recommends:

- Harvest only the amount needed;
- Licensed hunters receive a maximum of two bull tags;
- Shooting will be accurate and wounded animals will be retrieved; and
- Parties will collect rigorous and verifiable harvest data, to be provided for the Annual Harvest Meeting.

C. RATIONALE FOR BOARD RECOMMENDATIONS

The HMP identifies a suite of indicators that the Board should consider in determining the status of the herd (HMP, page 19). The following provides an overview of the information used in the Board's deliberations regarding the harvest management assessment, the determination of the Colour Zone, and the associated harvest management recommendations.

1. Harvest Management Assessment — Review of Indicators

1.1 Population Size and Trend

1.1.1 Population size by photocensus (survey): The primary consideration is the population estimate. A photocensus (survey) was last successfully conducted in 2017 and estimated a mean of 218,457 caribou (95% CI = 202,106 to 234,808) caribou. This is well above the threshold for the Green Zone. Although the herd did not aggregate, a photocensus was attempted in 2023. Upon evaluation of the photos, it was found that a reliable population estimate could not be determined because there was insufficient coverage and the caribou groups photographed were overly scattered. The herd was monitored for a photocensus in 2024 but the herd did not aggregate sufficiently to allow for a photocensus.

1.1.2 Estimated population based on computer program: A range of population estimates was developed using the best available data and an acknowledgement of the uncertainty associated with each value in a population model. No information was available for the number of calves surviving to one year so several different rates that have been observed in migratory caribou herds were used. During model preparation, harvest data was not available from all user groups, including Alaskan harvesters. Instead, the model used harvest estimates based on the best available information from harvesters in communities combined with past documented harvest levels. Despite the growing period of time since the last photocensus in 2017 and lack of recruitment data for the herd, the model continues to be helpful in assessing the annual trends in the population. The majority of modelled population estimates indicate that the herd has remained stable or has slightly declined since the photocensus, with a high probability of a decline greater than 10%. The model indicates that the herd has declined the last two years. Based on the most current model predictions from June 2024, the Board is very confident that the herd remains well within the Green Zone.

1.1.3 Population trend: From 2010 to 2017 the population increased from 169,000 to about 218,000 animals. The average annual growth rate during this time period was 3.5%. Since 2017, there has been no photocensus information to describe the trend of the herd; therefore, the population trend in the short term is unknown. Survival rates among yearling and adult male caribou have declined over the past two years, with low cow survival noted in 2022-23. Calf survival rates in 2024 were lower than average to three weeks of age although the calf-to-cow ratio was near average. Most population model scenarios found that the herd has declined from the 2017 population estimate.

1.2 Harvest

1.2.1 Total harvest: Harvest data for 2023-24 was received from all Parties; however, there were several challenges noted, including a lack of harvest data available for the communities of Inuvik and Tuktoyaktuk. Based on the reported and estimated information provided by the Parties, the total minimum Canadian harvest for 2023-24 was estimated to be 523 caribou. Alaskan harvest is estimated between 400 and 700, although this is a crude estimate based on the number of harvesters. This number

includes 221 caribou harvested by licensed hunters in Alaska plus estimated household harvest by communities in the herd's range. Data this year, as in the past several years, is incomplete and considered to be a minimum estimated harvest for several Canadian Parties (e.g., GTC, IGC).

The total estimated harvest has fluctuated since 2010 when the HMP was implemented. Annual variation in harvest can be accounted for by changes in caribou availability along with some differences and variability in harvest reporting success each year. Overall, improvements are being made in community harvest reporting programs. Available data, anecdotal information, and caribou availability suggest the Canadian harvest was likely low and together with Alaskan harvest remains well within sustainable limits (i.e., <1% of either the 2017 population estimate of approximately 218,000 caribou or the modelled mean of 198,000). Based on the information provided, current Canadian and range-wide harvest is not a major concern.

1.2.2 The percentage of cows in the harvest: Cows made up 17% of the harvest based on information available during the Annual Harvest Meeting. Caribou became accessible near Old Crow following the rut and were available on the Yukon North Slope in late summer.

1.2.3 Hunters' needs met: There was very limited availability of caribou to most Canadian hunters during 2023-24. Periodic harvesting occurred near Aklavik and Old Crow. No information was available to formally address this specific indicator; however, Aklavik noted that their caribou needs were not met during 2023-24.

1.3 Population dynamics

1.3.1 Survival: Estimated survival rates declined in 2023-24 for adult males (64%) and yearling females (75%) and was close to the five-year average for adult females (89%). Not reported in the yearling survival data for 2023-24 was that 25% of calves which were collared in spring 2024 did not survive to June 1, meaning the number of calves coming into the population for this birth year is likely very poor.

When the adult female survival is greater than 84-85%, the herd is generally either stable or increasing. When the female survival rate drops below this value, it is typically indicative of a declining herd. However, as noted, the decline in calf, yearling, and bull survival rates this year mean that the average adult female survival rate of 89% was insufficient to maintain the herd size in 2023-24.

Data in 2024-25, though incomplete, indicates that survival estimates to February 2025 are some of the lowest recorded over the past decade for all herd cohorts. It is very likely the herd will decline further this year.

1.3.2 Calf birth rate and calf survival: The parturition rate for adult cows greater than or equal to four years of age was 86%. This is consistent with the long-term average of

82%. Three-year-old cow parturition was 33%, which is lower than the five-year average of 56%. Rates lower than 55% may be indicative of a declining herd.

Late-June calf survival in 2024 was low at 79% compared to the long-term average of 86%.

1.3.3 Peak of calving: The Alaska Department of Fish and Game has been undertaking a greater number of calving surveys in recent years to identify which collared caribou are pregnant and where they give birth. As a result, calving data in recent years has been relatively high quality. This year's peak of calving was June 4, which was two days later than both the long-term and recent averages for the herd (June 2).

Deep snow during the calving period on the coastal plain meant cows concentrated calving on the upper Babbage and Trail rivers, with some calving at Timber Creek within Vuntut National Park, the upper Firth River, and the Alaska coastal plain near the Hulahula River.

1.3.4 Bull ratio: A rut count was attempted in October 2023. Unfortunately, significant spatial heterogeneity (i.e. some areas had more calves than others and some had more bulls than expected, often without a clear pattern), made the interpreting of results impossible. No other surveys to determine the ratio of adult bulls to cows have occurred in recent years. In 2010, the rut count results showed 57 bulls per 100 cows. Despite the lack of recent successful rut count results, there is no reason to believe there are too few bulls to breed the cows.

1.4 Body Condition

1.4.1 Average backfat: In 2023-24, nine caribou were assessed for backfat depth. The low number of samples did not allow us to calculate a meaningful average for the year.

1.4.2 Hunter assessment: A total of nine caribou were reported in the caribou sampling initiative this year. The low number of samples did not allow us to calculate a meaningful average for the year.

1.4.3 Health: There was no dedicated effort to collect information on the health of Porcupine Caribou this year. Other health screening, such as disease and contaminants screening, continues and no major changes have been noted.

1.5 Habitat

1.5.1 Snow conditions: In 2023-24, snow depth was above average throughout the Yukon and the Richardson Mountains. Snowpack in the Porcupine River drainage reached a historic high. Caribou were distributed west of Arctic Village to the Dalton Highway. Snow depths in this area were reported as average.

1.5.2 Major fires: In 2023, there were 11 fires in Alaska, 49 in Yukon, and one in the NWT within the range of the PCH. These fires burned a total of ~2,250 km², which was above the five-year average of 1,434 km² and is considered very high compared to historic data. Six fires were considered large (>10,000 ha), including several in areas of good winter habitat. The largest fire occurred on the northeastern edge of Old Crow Flats between Johnson and Blackfox creeks and included significant burn in tundra habitats.

1.5.3 Weather and Climate: There was no concerted monitoring for weather and climate in 2023-24.

1.5.4 Human activity: There were no additional detectable increases in human footprint in 2023-24. Potential projects in the range include oil and gas developments in the 1002 Lands and in the Eagle Plains area.

2. MANAGEMENT ACTIONS

The Board recommends management actions consistent with the Green Zone, as outlined in the HMP (page 20) as follows:

- Harvest only the amount needed;
- Licensed hunters receive a maximum of two bull tags;
- Shooting will be accurate and wounded animals will be retrieved; and
- Parties will collect rigorous and verifiable harvest data, to be provided for the Annual Harvest Meeting.

2.1 Harvest only the amount needed: In the Green Zone, Indigenous harvest is not restricted. Cows and bulls may be harvested (HMP, page 13). Consistent with the HMP, the Board recommends no restrictions be placed on caribou harvesting by Indigenous hunters.

2.2 Licensed hunters receive a maximum of two bull tags: Management of licensed harvest is clearly laid out in the HMP. The Board, therefore, recommends no changes.

2.3 Shooting will be accurate and wounded animals will be retrieved: The Board recommends the continuation of hunter education and awareness programs conducted by the Parties as outlined in Essential Requirements of the Plan on pages 27 and 32 of the HMP. To this end, the Board intends to continue to coordinate with the Parties on communication and hunter education initiatives such as sight-in-your-rifle events.

2.4 Parties will collect rigorous and verifiable harvest data, to be provided for the Annual Harvest Meeting: Overall improvements are being made in community harvest reporting programs, although data submissions to the Board continue to be late. The Board reminds the Parties of the Milestones Calendar outlining dates and deliverables for harvest data submissions which were agreed to in the HMP Implementation Plan (Appendix 8). Harvest data is due from Yukon Government (YG) and the Government of the Northwest Territories by June 1 and from First Nation and Inuvialuit Parties by July

15 each year. Harvester participation in these programs varies by community, and in some communities, it is known to be low. The Board continues to express concern regarding its ability to effectively recommend management actions in the absence of complete harvest data from all communities.

D. RECOMMENDATIONS REGARDING OTHER CONCERNS

1. Prioritize outstanding tasks from the HMP Implementation Plan that enable harvest reporting (task 1.1) and sharing (task 2.2).

All monitoring of the herd indicates that it is currently declining from its population peak in 2017. Other uncertainties continue to raise concerns for the herd's well-being (e.g., disease, habitat changes caused by a warming climate). Precautionary measures should be initiated while the herd remains in the Green Zone. Specific actions include:

- Parties to the Native User Agreement (NUA) appoint Commission members and convene to address outstanding needs of the NUA;
- Clarify sharing between Yukon First Nations and YG in the Orange Zone;
- Work toward a Canada range-wide tag; and
- Continue to improve harvest data and reduce gaps in data collection.

2. Provide monitoring information and on the land observations to assist the Board in its recommendations.

The HMP relies heavily on a number of indicators and on-the-land observations. The Board supports additional efforts by YG and its partners in Alaska to obtain a photocensus; however, in the absence of a new estimate in the coming year(s), the Board recognizes that there will be a need to rely more heavily on the suite of remaining indicators reported annually at the AHM. The important contribution of on-the-land observations during deliberations and in supporting the development of specific scientific indicators (e.g., population model) is also recognized.