

# **Porcupine Caribou Harvest Management Plan Annual Harvest Meeting 2023**

## **Porcupine Caribou Management Board Recommendations to the Parties March 2023**

### **A. PREAMBLE**

In accordance with the Harvest Management Plan (HMP), the Porcupine Caribou Management Board (Board) held the 13<sup>th</sup> Annual Harvest Meeting in person in Dawson from February 14 to 15, 2023. 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 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 efforts have occurred from 2019 to 2022, a new photocensus has not been possible since 2017 due to caribou movements, weather, and smoke.

**1.1.2 Estimated population based on computer program:** A range of population estimates were developed using the best available data and an acknowledgement of the uncertainty associated with each value in a population model. Model results are current to June 2021 as limited data was available beyond this point (e.g., adult survival). 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. A calf survival rate that was reflective of the trend associated with the survival of calves to three weeks old and based on community/ field worker observations was selected. Harvest data was not available from all user groups when the population model was utilized. To ensure harvest was accounted for, the model used the best information from harvesters in those communities combined with past documented harvest levels to estimate harvest. Differences in the estimate of harvest relative to actual harvest are believed to be small and unlikely to have affected the outcome of the population model estimates significantly. Model runs found the herd was stable or more likely increasing. A very small proportion of the worst-case scenarios indicate that the herd had declined. Although the model is up to date to June 2021, and there is limited monitoring data for 2021-22, there is little evidence the herd has declined below the Green Zone or undergoing a significant decline at this time.

**1.1.3 Population trend:** An increasing trend was apparent from 2010 to 2017 when the population increased from 169,000 to about 218,000. The average annual growth rate during this time period was 1.035 or 3.5%. Since 2017, there is no photocensus information to describe the trend of the herd and with limited data available for 2021-22, the population trend in the short term is unknown.

### 1.2 Harvest

**1.2.1 Total harvest:** Completed harvest data for 2021-22 was received from several parties (i.e., Vuntut Gwitchin, Tr'ondëk Hwëch'in, and YG), and GNWT provided information related to the maximum harvest possible by licensed hunters; however, there were several challenges with collecting harvest data, including the partial data received for the caribou year from the NWT Gwich'in and Inuvialuit, and no data was received from the First Nation of Nacho Nyäk Dun. Parties have plans to address these issues in the coming year and the Board looks forward to completing data gaps for 2021-22 and ensuring there is a good collection of the new harvest year 2022-23. With the widespread availability of caribou for harvest in 2022-23, this harvest reporting will be important. Based on the reported and estimated information provided by the Parties, the total minimum Canadian harvest for

2021-22 was estimated to be 501 caribou. Data this year, as in past several years, is considered to be a minimum estimated harvest.

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 success in harvest reporting each year. Overall, improvements are being made in community harvest-reporting programs. The reported Canadian harvest is incomplete at this time. Available data, anecdotal information, and caribou availability suggest that it's likely the Canadian harvest was very low (i.e., <1% of the 2017 population estimate of approximately 218,000 caribou). Based on the information provided, current Canadian harvest is not a major concern. The Alaskan harvest numbers are unknown.

**1.2.2 The percentage of cows in the harvest:** Cows made up 26% of the harvest based on information available during the Annual Harvest Meeting. Caribou availability was low and harvest numbers were likely reflective of cow and bull availability to harvesters.

**1.2.3 Hunters' needs met:** Caribou were not readily available to most communities, other than to Old Crow during short periods over the harvest year. No information was formally collected to address this specific indicator, however the low number of caribou harvested is a clear indicator that needs were not met in most communities.

### ***1.3 Population dynamics***

**1.3.1 Survival:** No results are available from 2021-22 data at this time. In 2020-21, adult female survival was high, at 95%. In recent years, this survival rate has been relatively high, averaging 89% between 2012 and 2021. When the adult female survival is greater than 85%, the herd is generally either stable or increasing. When this survival rate drops below this value, it is typically indicative of a declining herd. Yearling females had good survival (81%) as did the adult bulls in 2020-21 (68%). These are both near the average for survival.

**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 76%. This is below the long-term average of 82%. Calf survival to the third week was above average at 93% compared to the long-term average of 88%.

**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 is slightly later than the long-term average of June 2. Most calving occurred on the coastal plain in Alaska, in or immediately adjacent to the 1002 Lands of the Arctic National Wildlife Refuge.

**1.3.4 Bull ratio:** No surveys to determine the ratio of bulls to adult cows have occurred in recent years. In 2010, the rut count results showed 57 bulls per 100 cows. Rut counts were planned for 2012, 2013, and 2017, but they were unsuccessful due to herd mixing with the Central Arctic caribou, adverse weather conditions, and herd movements. It is expected with the current harvest rate that the bull ratio is likely similar to the 2010 survey.

#### ***1.4 Body Condition***

**1.4.1 Average backfat:** In 2021-22, 5 cows and 6 bulls, for a total of 11 caribou, were assessed for backfat depth. Most of these caribou were harvested in winter. Female backfat averaged 0.3 cm while male backfat average 0 cm. All sampled caribou came from the Whitefish Lakes area where snow depths were well above average and layered.

**1.4.2 Hunter assessment:** A total of 11 caribou (5 cows and 6 bulls) were reported in the caribou sampling initiative (CSI) program this year. In 2021-22, hunters reported that, on average, harvested caribou were in fair shape for the time of 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 screening, continues and no major changes have been noted. YG is working to summarize serology (blood sampling) results in the coming year and will make results public when completed.

#### ***1.5 Habitat***

**1.5.1 Snow conditions:** In 2021-22, snow depth was above average throughout the Yukon with the exception of the Yukon North Slope. There appears to be a trend toward an increasing snow depth in the Yukon and Eagle region in particular. Most caribou were distributed to the west in Alaska where snow conditions were not as deep as in the Yukon.

**1.5.2 Major fires:** In 2021, there were seven fires in Alaska, six in Yukon, and seven in the NWT within the range of the PCH. Fires tended to be relatively small with limited habitat burnt. One larger fire did occur to the southeast of Old Crow. Although 2022 fire data was not available in time for the report, several small fires occurred in the Yukon and NWT. A new lichen data layer describing the percentage of cover of lichen in five-year increments since 1985 is now available. This data layer will tell us more about the influence of fires on the herd's habitat. Work is underway to understand how to best report on this new set of monitoring data.

**1.5.3 Weather and Climate:** There was no concerted monitoring for weather and climate in 2021-22. Inuvialuit reported strange weather that was frequently changing.

**1.5.4 Human activity:** There were no additional detectable increases in human footprint in 2021-22. Potential projects in the range include oil and gas developments in the 1002 Lands and also in the Eagle Plains area, in addition to some mineral exploration at the southern edge of the herd's range in Yukon. A winter snowcat trail was constructed into Old Crow in winter 2021-22.

## **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 PCMB continue to be late. The Board would like to remind the Parties of the milestone dates and deliverables for harvest data submission provided in the HMP IP (Appendix 8). As a reminder, harvest data is due from YG and GNWT 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 is known to be low. The Board continues to express concern on its ability to effectively recommend management options in the absence of complete harvest data from all communities.

## **D. RECOMMENDATIONS REGARDING OTHER CONCERNS**

### **1. Increase community accessibility to Annual Harvest Meeting**

Parties requested virtual access to the AHM public session for community members who would otherwise not be able to attend in person. While Party representatives will still be expected to participate in person, the Board recognizes the importance of hearing from knowledge-holders in the

communities. The Board will work with Parties and stakeholders to organize community access points for virtual connectivity during the AHM.

**2. Advise the Board of PCH outreach priorities for the development of communication materials**

Several comments were made at the Annual Harvest Meeting regarding the need for education, communication, and outreach on a number of topics, particularly targeting youth. The Board will be reviewing its communication plan and prioritizing associated actions in June 2023. Parties and stakeholders are requested to advise the Board of their PCH outreach priorities and preferred methods of communication for the development of communication materials by **May 31, 2023**.

**3. Parties recommend the HMP and IP be reviewed following completion of the Conservation Plan or as needed, pending the herd status.**

An administrative review of the IP was completed in 2015-16 and a full review was initially scheduled for 2021 to evaluate the effectiveness and need for any revisions of the HMP and IP, in accordance with IP action item 3.3.1.

Following discussion with Parties, the Board recommends that the HMP and IP review be undertaken following the completion of the PCH Conservation Plan or as needed, pending herd status.