

# **Porcupine Caribou Harvest Management Plan Annual Harvest Meeting 2017**

## **Porcupine Caribou Management Board Recommendations to the Parties February 2017**

### **A. PREAMBLE**

In accordance with the Harvest Management Plan (HMP), the Porcupine Caribou Management Board (Board) held the seventh Annual Harvest Meeting (AHM) on February 14 and 15, 2017 in Inuvik, NWT. The Board convened the meeting to gather input and 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 Porcupine Caribou Herd be considered in the Green Zone (above 115,000 caribou).

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

- 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 before 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, and 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 2013 and found 197,228 caribou (95% CI = 168,667 to 225,789) caribou. This is well above the threshold for the Green Zone. A photocensus was not attempted in 2014. The photocensus was not possible in 2015 due to herd overlap with the Central Arctic Herd and was not possible in 2016 due to poor light conditions. The next photocensus (survey) is scheduled for summer 2017.

**1.1.2 Estimated population based on computer program:** We were unable to generate an estimate this year as harvest data were not available prior to the Annual Harvest Meeting. In the absence of a photocensus, this information is one of the best science-based tools to help understand how the herd is doing as it combines many of the other information that the PCTC monitors and helps the PCTC understand whether or not the herd had a good year. The harvest data is not being provided in time to generate a population estimate for the AHM.

**1.1.3 Population trend:** An increasing trend is fairly apparent from 2010 to 2013 when the population increased from 169,000 to 197,000. The trend from 2013 to 2017 is unknown.

## 2. Harvest

**1.2.1 Total harvest:** The Porcupine Caribou Technical Committee (PCTC) was able to estimate a total harvest for the herd in Canada with data submitted by the Parties; however, there is still some data missing. Based on the reported and estimated information provided by the Parties, the total Canadian harvest for 2015-16 was estimated to be 3,367 caribou. Data this year, as in the past several years, is considered to be a minimum estimated harvest. The new Inuvialuit program to collect harvest data on a monthly basis was initiated in January 2016. Response rates are low in the initial months but are increasing. For this reporting period, Inuvik harvest in particular is under-reported. No Porcupine Caribou harvest was reported for Tuktoyaktuk (Inuvialuit) during this period of low response and self-identification of the herd; however, it is believed the harvest from this community is minimal. Vuntut Gwitchin First Nation's reported harvest had data missing from a number of months due to lack of staff. For these reasons, we believe the estimate of 3,367 is low compared to what was actually harvested by all Parties in Canada.

This total estimated harvest is an increase from the estimated 753 caribou harvested in 2014-15. Overall improvements are being made in community harvest-reporting programs, although data submissions to the PCMB continue to be late. Harvester participation in these programs varies by community and in some communities is known to be low. The estimated Canadian harvest is about 2% of the 2013 population estimate. Based on the information provided, current Canadian harvest is not a major concern.

**1.2.2 The percentage of cows in the harvest:** Cows made up 44% (1,472 cows) of the harvest, which is an increase over 2014-15. This level of cow harvest is not concerning when the herd is in the Green zone. Any harvest where caribou gender was not identified was counted as a cow.

**1.2.3 Hunters' needs met:** Arctic Borderlands Ecological Knowledge Co-op (ABEKC) data indicated 79% of respondents range-wide met their needs in 2015. This is the highest result since 2010 and is 14 percentage points higher than the five-year average of 65%.

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

**1.3.1 Adult cow survival:** The PCTC reported that there was no estimate of adult survival in 2015. For 2011-12, it was reported that 87.9% of cows survived, which is higher than the 2003 to 2006 period (82.5%). The herd's population trend is sensitive to small changes in cow survival and our current monitoring program will detect only large changes. The PCTC is assessing how to monitor cow survival and make this indicator more useful for annual assessments.

**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 75%. This is slightly below the long-term average of 81%. This rate will continue to be monitored and if consecutive years of low ratios are found, greater concern may be warranted.

**1.3.3 Peak of calving:** Surveys were conducted June 3-4, and 17 of 28 collared cows had a calf at heel, indicating that peak of calving occurred prior to the survey. The long-term average peak of calving date is June 1.

**1.3.4 Bull ratio:** In 2010, the rut count results showed 57 bulls per 100 cows. Another rut count was conducted in 2012 but results were biased and unreliable. The survey was cancelled in 2013 due to PCH mixing with the Central Arctic Herd. The next rut count survey is planned for fall of 2017.

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

**1.4.1 Average backfat:** No data were available for 2014-15 due to low harvest. In 2015-16, we had backfat measurements reported for 21 cows and 16 bulls. Average male backfat, as measured in August and September, increased from the previous year to 3.4 cm, which was higher than the five-year average. Female backfat, as measured in October and November, averaged 0.3 cm. Differences in male and female backfat are attributed to the different times of year the samples were taken.

**1.4.2 Hunter assessment:** Forty-two caribou were reported in the caribou sampling initiative (CSI) program this year. In 2015-16, hunters reported that harvested bull caribou were generally in very good shape (3.1) while the cows were in fair condition (1.8). The difference in condition between the two sexes may be a result of bull samples being acquired in September, prior to the herd moving into Alaska, while cows were sampled in November, following a significant movement from Alaska to the Dempster Highway, which

resulted in most caribou losing condition. The sample size is higher than previous years, but harvester participation should continue to be encouraged.

**1.4.3 Health:** ABEKC data from 2015 indicate overall body condition was good in most seasons. This is similar to 2014; however, in 2015 the majority of respondents reported that caribou were in fair condition in the summer.

## **1.5 Habitat**

**1.5.1 Snow conditions:** In 2015-16, snow depth was above average in Eagle and Old Crow regions, slightly below average in Ogilvie, and average in all other areas. Recent data doesn't show any significant trends or large deviations from long-term averages. Most caribou spent the winter in areas with above-average snowfall.

**1.5.2 Major fires:** No major fires were reported in the range in 2015; a total of 566.5 km<sup>2</sup> burned. As of the 2015 season, the total area burned by fires since 1960 is 39,018 km<sup>2</sup> or roughly 15% of the herd's total annual range. Mapped data from 2016 was not yet available; however, there were no large fires in 2016.

**1.5.3 Weather and Climate:** Based on ABEKC data, there was a significant increase in the percentage of people interviewed who reported there was "more snow than normal" in fall 2014 and winter 2015. Fewer people reported icing events in the fall but "more ice than normal" in the winter of 2015.

**1.5.4 Human activity:** There were no additional detectable increases in human footprint in 2015-16, although proposals have been forwarded to build all-season roads, conduct extended flow testing, and drill up to 20 additional wells 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 before the Annual Harvest Meeting.

**2.1 Harvest only the amount needed:** In the Green Zone, Aboriginal 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 Aboriginal hunters. Although cows may be taken under the recommended management actions, the Board continues to encourage a bull-dominated harvest where possible since harvesting bulls has less of an impact on the herd than harvesting cows (see HMP, page 24).

**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 as 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. Harvester participation in these programs varies by community and in some communities is known to be low. As collecting harvest data under the HMP is still a relatively new activity for some Parties, it is understandable that there will be challenges to overcome to ensure the data are rigorous and verifiable, and are analyzed and reported consistently.

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

- 1. Native User Agreements:** The development of the Native User Agreements remains outstanding. The Board confirms its commitment to help facilitate the development of these agreements. The Board recommends that all Parties assist with contributing funding to complete activities 2.2.1, 2.2.2 and 2.2.4 of the HMP Implementation Plan (IP).
- 2. Sale, Trade and Barter Guidelines:** The Board developed PCH Sale, Trade and Barter Guidelines in 2011 based on consultation with the Parties and stakeholders. The Board has requested feedback from First Nation and Inuvialuit Parties regarding their implementation in PCH user communities. The Board recommends that these Parties report back to the PCMB on or before the 2018 AHM.
- 3. Dempster Highway hunting rights:** Drafts of updated information, maps and proposed wording for highway signage regarding Dempster Highway hunting rights were presented at the AHM. The Board and Environment Yukon will jointly send this information package to Parties with the recommendation that they review the information and provide feedback to the PCMB with the goal of having the information finalized prior to the fall PCH harvest season.
- 4. Committee on Status of Endangered Wildlife in Canada (COSEWIC):** The COSEWIC assessment of barren-ground caribou (BGC) in Canada as threatened was discussed. Correspondence outlining options for the development of a PCH management plan as part of the overall national recovery strategy for BGC will be sent to Parties for consideration.
- 5. Encourage hunter participation in programs:** Low hunter participation in some communities reduces confidence in harvest estimates and trend in caribou body condition. The Board recommends that Parties encourage their hunters to participate in harvest data collection and body-condition monitoring programs.

6. **Hunter education:** Concerns were raised about hunter ethics and behaviour, including gutting caribou on the highway. The Board will continue to work with Parties to address these issues through appropriate hunter education and communication programs.