

# **Porcupine Caribou Harvest Management Plan Annual Harvest Meeting 2011**

## **Porcupine Caribou Management Board Recommendations to the Parties March 10, 2011**

### **A. PREAMBLE**

In accordance with the Harvest Management Plan (HMP), the Porcupine Caribou Management Board (Board) held the first Annual Harvest Meeting (AHM) from February 8 to 10, 2011 in Inuvik, NWT. The Board convened a three-day 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 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 (see HMP, page 19). The following provides an overview of the available information used to support 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:** The primary consideration is the population estimate. A photocensus was successfully conducted in 2010. At the time of the meeting, the preliminary information from the Alaska Department of Fish and Game indicates the herd size in 2010 was at least 123,000 caribou<sup>1</sup> — well above the lower threshold for the Green Zone.

**1.1.2 Estimated population based on computer program:** Since the photocensus was completed, there was no need for the Board to consider a computer-estimated population size.

**1.1.3 Population trend:** Based on the Alaskans' report, the herd size has increased since the last photocensus in 2001. While the recent photocensus is higher than the one completed in 2001, there is insufficient information to determine the current trend in the population.

### **1.2 Harvest**

**1.2.1 Total harvest:** The Porcupine Caribou Technical Committee (PCTC) was unable to estimate a total harvest for the herd in Canada with data submitted by the Parties; however, significant progress was made toward this goal. Based on the information presented by the Parties at the AHM, harvest for 2009-10 was reported by communities to be lower than traditionally harvested due to the following:

- The distribution of caribou meant that fewer caribou were easily accessible to communities; and
- Hunters took personal responsibility to reduce their traditional harvest.

Based on the information provided it was felt current harvest is not a major concern.

**1.2.2 The percentage of cows in the harvest:** Preliminary results from harvest data reporting and field monitoring indicate harvesters are reducing their cow harvest and are selecting primarily bulls.

**1.2.3 Hunters' needs met:** PCTC has not yet requested current Arctic Borderlands Ecological Knowledge Co-op data to determine whether or not hunters' needs were met. However, submissions by the Parties indicate that many hunters have not met their needs for caribou over the past year. As noted above, information presented indicates many hunters reduced their traditional harvest. Distribution of the herd is also considered to have impacted harvest levels.

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<sup>1</sup> The results from the 2010 photocensus were released following the AHM. The population estimate was confirmed to be 169,000 caribou.

### **1.3 Population dynamics**

**1.3.1 Adult cow survival:** The PCTC reported that the recent survival estimate between 2003 and 2006 was similar to the estimate that was done when the herd began to decline, which was lower than when the herd was increasing. Because the herd is so sensitive to small changes in cow survival and our current monitoring program will detect only large changes, this may not be the most sensitive indicator.

**1.3.2 Calf birth rate:** The PCTC reported a slightly higher than average calf birth rate in 2010 (0.85 in 2010, compared to the five-year average of 0.82).

**1.3.3 Calf survival to nine months:** The composition count to measure calf survival has not been completed recently due to overlaps of Porcupine Caribou with other herds on the winter range. Harvesters reported seeing more calves in early spring 2010 than traditionally, which indicates good overwinter calf survival.

**1.3.4 Peak of calving:** The PCTC reported that 2010 peak of calving was typical and there has been no significant shift in dates over the years, which would indicate disruption of the rut or problems with pregnancy.

### **1.4 Body Condition**

**1.4.1 Average backfat:** The analysis of data from the Caribou Sampling Initiative (CSI) has not yet been completed.

**1.4.2 Hunter assessment:** Hunters participating in the CSI program report that harvested caribou are generally in good shape. However, the sample size is low, therefore lowering confidence in the results. The PCTC has not yet requested current caribou condition data from the Arctic Borderlands Ecological Knowledge Co-op to analyze.

**1.4.3 Health:** The PCTC has not yet requested current caribou abnormalities data from the Arctic Borderlands Ecological Knowledge Co-op to undertake an analysis.

### **1.5 Habitat**

**1.5.1 Snow conditions:** A complete dataset from all known data sources has not yet been compiled. Preliminary data for some areas/years was presented but, as yet, cannot yet be used as an index of winter conditions.

**1.5.2 Major fires:** There were three major fires in the herd's total range in 2010. During the past decade, there is a pattern of increasing frequency and size of fires, in comparison to average fire frequency and size over the past 50 years. Community concern has been expressed about the effects on caribou winter range and migration patterns. Fourteen percent of the total range of the herd has burned in the past 50 years. As indicated in the PCTC report, caribou tend to

avoid major burn areas (over 10,000 hectares); however, forests burned by wildfire can produce enough lichen forage that the habitat can again become important to caribou within 40 to 50 years after the burn. There is much variability in how fires affect caribou in the short term and long term. As an index of winter range quality, this indicator needs to continue to be monitored.

**1.5.3 Weather events:** No current information was presented by the PCTC or the communities. For AHM meetings in the future, the PCTC intends to use data from the Arctic Borderlands Ecological Knowledge Co-op as well as information compiled by the CircumArctic Rangifer Monitoring and Assessment Network. In addition, the Board invites relevant Parties to gather and submit local information on weather events from the communities.

**1.5.4 Human activity:** No current information was presented. For future AHM meetings, the Board will explore options for accessing and incorporating information related to human activity that has an effect on the herd or its habitat.

## **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, Aboriginal harvest is not restricted. Cows and bulls may be harvested (HMP, page 12). Consistent with the HMP, the Board recommends no restrictions be placed on caribou harvesting by Aboriginal hunters.

Some Parties expressed concern regarding a continued bull-dominated harvest; namely, that this practice reduces the ratio of bulls to cows to a level where breeding is disrupted, and selectively removing the fittest bulls from the herd may affect the population. To address these concerns, the Board recommends that the PCTC continue to monitor the sex ratio of the herd. The Board heard submissions that harvesters are not only selecting the oldest and fittest bulls, they are also selecting young bulls. The Board is, therefore, persuaded that there is currently minimal risk of removing the fittest bulls from the population. Although cows may be taken under the recommended management actions, the Board continues to encourage a bull-dominated harvest where possible for the following reasons:

- As noted above, the population trend of the herd is uncertain; and
- 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 that licensed hunters in Yukon and NWT be eligible to receive a maximum of two bull tags each per year.

**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 work in a coordinating role with the Parties on communication initiatives.

**2.4 Parties will collect rigorous and verifiable harvest data, to be provided for the Annual Harvest Meeting:** The Board was encouraged with the significant progress in harvest data collection and reporting. As this was the first year of collecting harvest data under the HMP, it is understandable that there will be challenges to overcome to ensure the data is rigorous, verifiable, analyzed and reported consistently. All Parties reiterated their commitment under the HMP to collect and report harvest data. The Board will explore with Parties the potential of coordinating a workshop for harvest data program administrators to facilitate consistent collection and reporting among user communities.

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

**1. All Parties participate in entire AHM in person:** Some Parties were not present or were connected to the meeting by phone during the Public Information and Comment session and/or the *in camera* Parties and Board session. This created a situation that was less than ideal since it impeded the free flow of communication and the barrier-free exchange of information. Not only are absent Parties denied full input to the process, they do not hear input provided by the other Parties, co-management boards or the public. The Board recommends that all Parties participate at the AHM in person for both the full Public Information and Comment session and the *in camera* Parties and Board session.

**2. Incorporate local and traditional knowledge into process:** The Board values both scientific and local and traditional knowledge to inform its deliberations. The Board notes a lack of local and traditional knowledge available for consideration during this process; therefore, user communities and appropriate Parties are urged to provide more local and traditional knowledge for the Board to consider in its recommendations (see Appendix B to AHM Operating Procedures).

**3. Provide more information on computer modelling applications and limitations:** Communities expressed concerns about how the Caribou Calculator has been used and how the apparently conflicting herd size information from the 2010 photocensus resulted in an increased lack of confidence in computer modelling. It was reiterated that the Caribou Calculator model was designed as a tool to explore the relative effects of different harvesting scenarios for the herd

and it was never intended to be used as a population estimator (see HMP, pages 14 and 15). Some, however, feel that the model's projections were attributed too much weight in management actions to date. The model is being revised into two components: one that will provide an estimate of the population along with a stated measure of uncertainty, and the other that can be used as a tool to explore relative effects of different harvesting scenarios. This will provide the Board and Parties with a more appropriate risk-management and decision-support tool. The Board will work with the expert contractor, PCTC and Parties to ensure appropriate application/review of the model and its inputs and communication with the user communities on the role of the model.

**4. Research caribou immigration and emigration:** Traditional knowledge states that the exchange of caribou between herds and ranges can significantly affect the results of a herd's population estimate. Concern was raised about the PCH photocensus not adequately considering caribou immigration and emigration. The Board recommends research into caribou movement as it relates to estimating the PCH size either by photocensus or computer modelling

**5. Review interim measures regulation:** Significant concern was raised with regard to the Government of Yukon's interim measures regulation (Porcupine Caribou Subsistence Harvest Regulation, OIC 2009/159) and its impact on Aboriginal harvesting and cooperative working relationships. Several Parties felt strongly that this regulation should be rescinded immediately. It is the Board's understanding that this regulation was enacted as an interim conservation measure while the HMP was being developed and implemented. The Board recognizes Government of Yukon's intent to review the interim measures; however, to address concerns raised by several Parties and to demonstrate good faith and a desire to cooperatively work together, the Board recommends that this regulation be reviewed as soon as possible with a view to ensuring any such regulations for the upcoming year are consistent with Green Zone management actions identified in the HMP. While it is possible that a similar regulation might be used in the future to deal with implementation actions under the HMP, any such regulation should be developed in cooperation with all the Parties.

**6. Undertake consistent enforcement efforts in key harvest areas:** Concern was raised regarding inconsistency in field monitoring efforts by enforcement personnel. In particular, enforcement activities seem to focus on the Dempster Highway, while other commonly hunted areas such as Old Crow and the Yukon north coast did not receive as much attention. The Board recommends that enforcement effort is consistent in key harvest areas throughout the Canadian range.