



MAY 11 2016

Mr. Daniel Shewchuk
Acting Chairperson
Nunavut Wildlife Management Board
PO BOX 1379
IQALUIT NU X0A 0H0

Email: receptionist@nwmb.com

Dear Mr. Shewchuk:

**GNWT Submissions to the NWMB Public Hearings
on a Total Allowable Harvest for the Bathurst Caribou Herd**

The Government of the Northwest Territories (GNWT), Department of Environment and Natural Resources (ENR) is pleased to provide a written submission for the Nunavut Wildlife Management Board (NWMB) public hearings to consider harvest management of the Bathurst caribou herd within Nunavut. Please find attached copies of the written submission in English and Inuktitut/Innuinaqtun. A number of supporting documents are also attached.

If you have any questions, please contact Ms. Lynda Yonge, Director of Wildlife, at lynda.yonge@gov.nt.ca or by phone at (867) 767-9237 ext. 53210.

Sincerely,

Ernie Campbell
Deputy Minister

Attachments

c. Mr. Fred Mandeville, Assistant Deputy Minister Operations, ENR, GNWT

Ms. Lynda Yonge, Director of Wildlife Division, ENR, GNWT

Mr. Drikus Gissing, Director of Wildlife Management
Department of Environment, Government of Nunavut

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Nunavut Wildlife Management Board Public Hearing To Consider a Regional Total Allowable Harvest for the Bathurst Caribou Herd June 14-15, 2016

Submission from Government of the Northwest Territories (GNWT), Department of Environment and Natural Resources (ENR)

Summary: This document summarizes information on the status of the Bathurst caribou herd, recent and proposed management actions for this herd in the Northwest Territories (NWT), and the GNWT's recommendations on harvest of Bathurst caribou. More detailed information on the herd is found in supporting documents. In 1986 the Bathurst herd was one of the largest migratory barren-ground caribou herds in northern Canada, estimated at about 470,000 caribou. Since then the herd has declined by about 96% to an estimate of just under 20,000 caribou in 2015. The herd declined most rapidly 2006-2009, appeared approximately stable 2009-2012 at 32,000-35,000 caribou, but declined further 2012-2015. The herd's recent vital rates (cow survival, calf survival, and pregnancy rate) suggest that further decline is likely. Management actions in the NWT since 2010 have included a reduction in the harvest from an estimated 4000-6000 caribou/year, primarily cows, to a harvest limit of 300 caribou/year, 80% bulls for Aboriginal harvesters from 2010-2014. Resident and commercial harvesting was closed in January 2010. A mobile protection zone was put in place to prevent all harvesting of the Bathurst herd in January 2015, and was continued for winter 2015/2016. In December 2015, the GNWT and the Tłıchǫ Government (TG) submitted a joint management proposal to the Wek'èezhii Renewable Resources Board (WRRB) that includes a 0 harvest for the Bathurst herd in the NWT for 2016-2019, based on the dramatic and continuing decline. The GNWT recommends a 0 harvest of the Bathurst herd in Nunavut (NU) due to the significant concern over the herd's conservation status, and to respect the sacrifices made by Aboriginal groups in the NWT that depend on this herd. The remainder of this summary has information on the following subjects: (1) Bathurst herd status, (2) Management context for the Bathurst herd, (3) Short-term management of Bathurst caribou in the NWT 2009-2015, (4) Recent harvest and harvest management in NWT, and (5) GNWT proposed harvest management for Bathurst herd.

1. Bathurst herd status

The Bathurst caribou range as determined from collared caribou locations since 1996 covers an area of about 350,000 km² (Figure 1). The herd's calving grounds since 1996 have been west of Bathurst Inlet and a large portion of the herd's summer range is in NU. The remainder of the herd's range, including most of the winter range, is in the NWT; occasionally some Bathurst caribou have wintered as far south as northern Saskatchewan. Since the herd's decline to much lower numbers after 2006, the range has contracted towards the north and the winter range in particular has been reduced, with much less use of the peripheral areas in the southeast and southwest.

The June 2015 calving ground photographic survey resulted in an estimate of $8,075 \pm 3,467$ (95% CI) breeding females, and an overall herd estimate of $19,769 \pm 7,420$ caribou in the Bathurst herd (Boulanger et al. 2016). These survey results showed that the herd has continued to decline in recent years, and is consistent with a June 2014 reconnaissance survey that suggested that there was a continued decline in breeding females. Figure 2 shows the estimated numbers of

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breeding cows in the Bathurst herd from 1986 to 2015, all derived using the same calving ground photographic survey method. From 1986 to 2015 the estimated abundance of breeding females declined on average by 11% per year. The observed rate of change between 2003 and 2009 showed that breeding cows had declined by ~26% per year. Subsequent calving ground surveys showed that the trend for breeding females appeared to be close to stable from 2009 to 2012. However the 2015 calving ground survey indicated that breeding females had declined at a rate of about 23% per year since 2012. Figure 2 also shows the estimated overall herd numbers for the Bathurst herd 1986-2015. The herd has declined about 96% from its peak in 1986 at 470,000 caribou to just under 20,000 recorded in 2015.

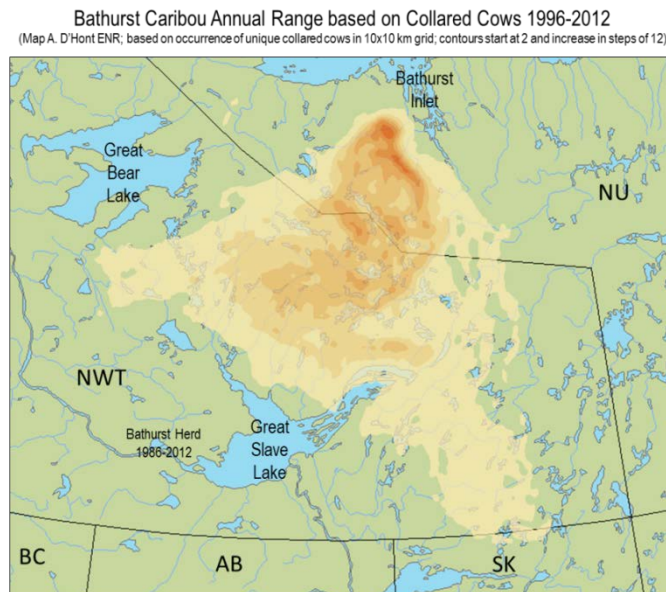


Figure 1. Bathurst caribou annual range in NWT and NU based on satellite-collared caribou cows 1996-2012. Lighter areas were used less often and darker areas more often.

Other demographic indicators for the Bathurst herd are consistent with a declining trend between 2012 and 2015:

- late-winter calf:cow ratios have averaged below 30 calves:100 cows (ratios of 30-40 calves: 100 cows or more are associated with stable herds);
- estimated cow survival has been well below the 80% needed for a stable herd; and
- there is evidence of low pregnancy rate in at least some years, including winter 2014-2015.

It is also important to note that only 61% of the caribou observed on the Bathurst calving ground in June 2015 were breeding females; generally this proportion is expected to be around 80% or higher at the peak of calving, as in 2009 (84%) and 2012 (82%). Demographic monitoring of the Bathurst and Bluenose-East (BNE) herds was summarized by ENR in late 2014 (ENR 2014), with more detailed survey and population modeling reports listed in that summary. A detailed draft survey report for the Bathurst herd in 2015 was available early in 2016 (Boulanger et al. 2016). This report includes an analysis of the herd's recent demographic information.

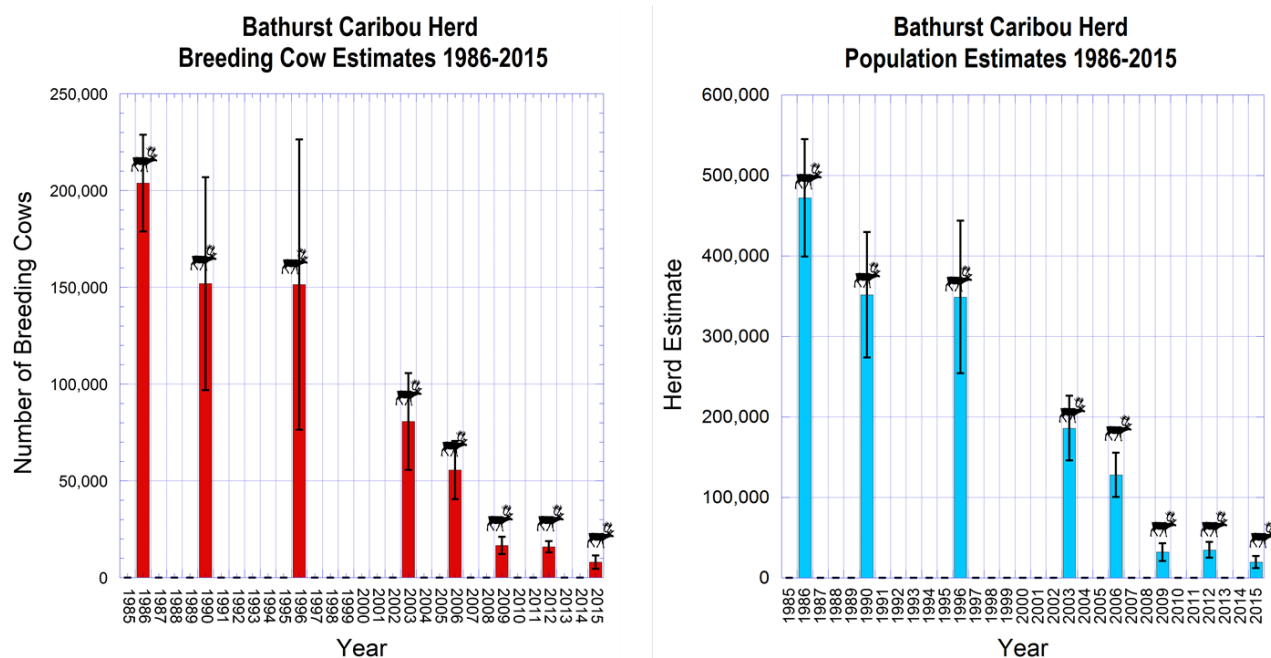


Figure 2. Estimated numbers of breeding cows (left, red) and adult caribou (right, blue) in the Bathurst caribou herd 1986-2015, based on calving ground photographic surveys conducted in June.

2. Management context for the Bathurst herd

Overall management: The Tłıchq (Land Claim) Agreement has a requirement for the WRRB, TG, GNWT and Canada to develop an overall long-term management planning process for the Bathurst herd. This process is to be developed with those parties that have jurisdiction over any part of the Bathurst range and with Aboriginal peoples who traditionally harvest the herd, including parties and communities in Nunavut. A number of meetings to define this long-term process began in 2012, and work continues to develop a comprehensive approach to managing the Bathurst herd. A two-day meeting was held in January 2016 in Yellowknife to discuss a path forward for a long-term Bathurst management planning mechanism, and included participation of the Government of Nunavut (GN) and a number of Inuit organizations. There was general support for the establishment of a Bathurst Caribou Herd Cooperative Advisory Committee, and a draft terms of reference was developed. Once established, this advisory group could serve as a key body to inform management of the Bathurst caribou herd.

Land use and range planning: In recognition of the importance of habitat conservation and management, and in light of current and proposed development on the Bathurst herd's annual range, work to develop a range plan for the Bathurst herd was initiated by GNWT in 2013. The range plan will provide guidance on how to monitor, assess and manage cumulative effects of human disturbance on the historic range of the Bathurst herd. Among the information layers gathered for this plan are collar and survey-based knowledge of the herd's seasonal and annual ranges, Traditional Knowledge from the NWT and Nunavut on use of caribou ranges and water

crossings, and locations of all existing and proposed roads, mines and mineral leases. This plan is being developed through a multi-partner collaborative process.

ENR has engaged in all recent Environmental Assessment (EA) processes within the Bathurst range in the NWT (e.g. Gahcho Kue, Jay Project), to ensure that possible effects on the Bathurst herd are duly considered and mitigated where possible. ENR has also engaged in EA processes in NU for projects that could affect the Bathurst herd's calving grounds and summer range (e.g. Sabina). A number of Aboriginal governments and other groups have also engaged in EA processes in NWT and NU. ENR has participated in a number of workshops in NU focused on protection of caribou habitat.

Predator management: As a result of the large and continuing declines in the Bathurst and BNE herds, the GNWT has led or supported a number of approaches to increase the harvest of wolves as a means of increasing caribou adult and calf survival rates. These approaches include:

GNWT ENR will lead a collaborative technical feasibility assessment of a full range of wolf management options in 2016, to consider the practicality, costs, and likely effectiveness of different management actions. The goal is to assess the feasibility of wolf management options for implementation within an adaptive management framework that would support recovery of barren-ground caribou herds. This assessment will be developed collaboratively with TG and the input of other Aboriginal governments and co-management partners.

In 2015, the GNWT revised its incentives to wolf harvesters to include 3 options (Figure 3). These include an option for a hunter to bring in an un-skinned, intact wolf for \$200, an incentive for \$450 for a wolf skinned to traditional standards, and an option for up to \$800 for a prime pelt skinned to taxidermy standards.

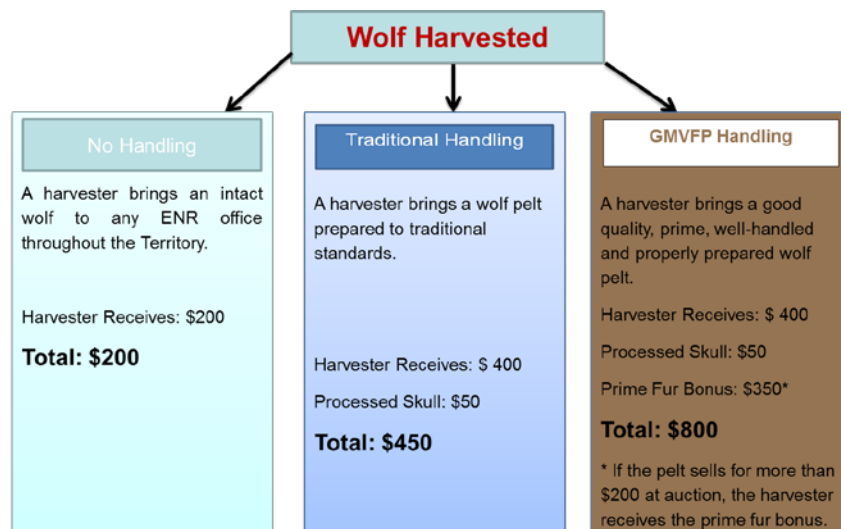


Figure 3. Incentives for wolf pelts available to wolf harvesters in the NWT in 2015.

The Tłıchq Government with GNWT support has developed a pilot community-based wolf harvest program associated with the Tłıchq communities that would include training and support

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for wolf harvest on the winter range of the Bathurst herd in culturally acceptable ways. Further information is provided in the joint TG-ENR Bathurst caribou joint management proposal to the WRRB.

3. Recent management of Bathurst caribou in the NWT 2009-2015

Until a long-term Bathurst management planning process and management plan are in place, recent management of the Bathurst caribou herd in the NWT has occurred primarily through management proposals for 3-year periods from the TG and ENR to WRRB, and by collaboration between GNWT and other Aboriginal Governments and organizations that traditionally harvested the Bathurst herd. A brief history of these proposals and associated board hearings and recommendations from 2009 to 2015 is provided below.

An initial joint management proposal for Bathurst caribou was submitted to the WRRB by TG and ENR in November 2009. While TG and ENR agreed on most of the management and monitoring actions described in the proposal, they did not agree on the management of Aboriginal harvest.

In December 2009 the Minister of ENR closed all harvest of Bathurst caribou in the NWT (resident, commercial, and Aboriginal) starting in January 2010 in two large management zones (RBC02 and RBC03); these measures were to remain in place until review and recommendations from the WRRB in 2010.

A 5-day hearing was held by the WRRB in March 2010 on Bathurst caribou management. This hearing was adjourned after a request from TG and ENR for an adjournment to re-visit the issue of Aboriginal harvest of the Bathurst herd.

A revised joint proposal from TG and ENR on caribou management was submitted to the WRRB in May 2010. The main recommendation in the proposal was to establish an annual harvest target of $300 \pm 10\%$ Bathurst caribou with a sex ratio of 80% bulls, with continued closure of resident and commercial harvest. The harvest target would be shared, with 150 caribou available to Tłıchʔ hunters and 150 for other Aboriginal users.

The WRRB held a second hearing in August 2010 and issued a report in October 2010 with 60 recommendations for management of Bathurst caribou and adjacent barren-ground caribou herds (Bluenose-East, Beverly/Ahiak; WRRB 2010). Those recommendations generally agreed with measures in the revised TG – ENR joint management proposal.

In October 2010, ENR signed an agreement with the Yellowknives Dene First Nation (YKDFN) that included tags or authorization cards for 150 Bathurst caribou, which included the same sex ratio of 80% bulls.

In spring 2013, WRRB recommended that short-term harvest of Bathurst caribou remain limited to 300 caribou and 80% bulls, and extended its 2010 recommendations for Bathurst caribou through the 2013-2014 hunting season.

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In July 2014 an updated joint management proposal from TG and ENR was submitted to WRRB with recommendations to continue the Bathurst harvest target of 300 caribou and re-focus efforts to increase wolf harvest via Tł̥chq winter camps. This proposal was put on hold when results of a June 2014 reconnaissance survey over the Bathurst calving grounds suggested a large further decline in caribou numbers.

In fall and early winter 2014, ENR hosted three meetings of Aboriginal leaders (August 27, November 7 and November 28) and two 2-day technical meetings (October 9-10 and October 22-23) to review the evidence of decline in the Bathurst and BNE herds and to consider management actions to address these declines. Participants generally recognized the seriousness of the situation but were unable to agree on a harvest recommendation for either herd.

In January 2015, ENR submitted a proposal to WRRB for interim management of Bathurst caribou. The proposal recommended use of a Mobile Core Bathurst Caribou Conservation Area centered on locations of collared Bathurst caribou for winter 2014-2015, with no harvest of caribou within the mobile zone. In January 2015, WRRB accepted this proposal on an interim basis for the balance of the 2014-2015 harvest season.

In Dec. 2015, TG and ENR submitted a joint management proposal for the Bathurst herd for 2016-2019 to the WRRB (GNWT and TG 2015). This included a recommendation for 0 harvest of the herd, continuation of the Mobile Core Bathurst Caribou Conservation Area or an alternate approach to managing harvest on the herd's winter range, a pilot Tł̥chq-led community-based wolf harvest program on the winter range, an ENR-led collaborative technical feasibility assessment of wolf management options, and continuation of monitoring of the herd by surveys, collars and other monitoring.

4. Recent harvest and harvest management in NWT

Harvest of Bathurst caribou in the NWT was substantial up to 2009, and included harvest by a number of Aboriginal groups, resident hunters and big-game outfitters. Harvest in 2007-2008 and 2008-2009 was not fully documented but estimates based on check-stations, community monitors, community interviews, and patrols by wildlife officers indicated that the harvest was on the order of 4000-6000/year (Adamczewski et al. 2009). The herd was easily accessible on winter roads northwest of Yellowknife even as it fell to lower numbers. After the June 2009 calving photo-survey documented a very rapid decline from more than 100,000 to about 32,000 in 3 years, harvest was substantially reduced at the beginning of 2010 (Figure 4); details on proposals, hearings and recommendations were given in the previous section. Overall, harvest was reduced about 95% to a harvest target of 300 Bathurst caribou in two large management zones, RBC02 and RBC03 for Aboriginal hunters (Fig. 4). Resident and commercial hunting, including the guide-outfitters that hunted this herd, was closed.

In June 2014 a reconnaissance survey over the Bathurst calving grounds suggested that the number of cows and herd size had declined substantially since 2012. Harvest was closed in the NWT on an interim basis for the winter 2014-2015 season; a Mobile Core Bathurst Caribou

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Conservation Area based on collared caribou locations was used as a no-harvest zone (Fig. 5). The mobile no-harvest zone was continued into 2015-2016, and the management proposal from TG and ENR currently under review by the WRRB would continue the 0 harvest until the Bathurst herd shows clear signs of recovering.

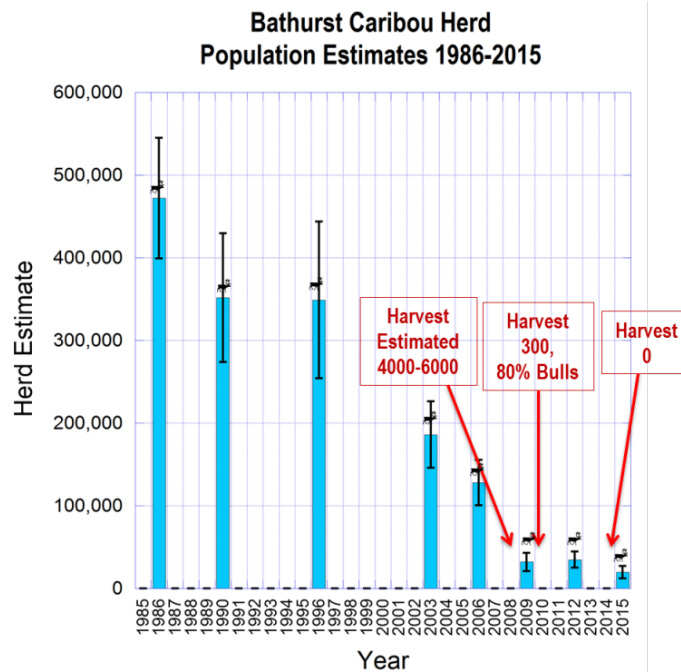


Figure 4. Population trend of the Bathurst herd 1986-2015 and changes to harvest management 2009-2015.

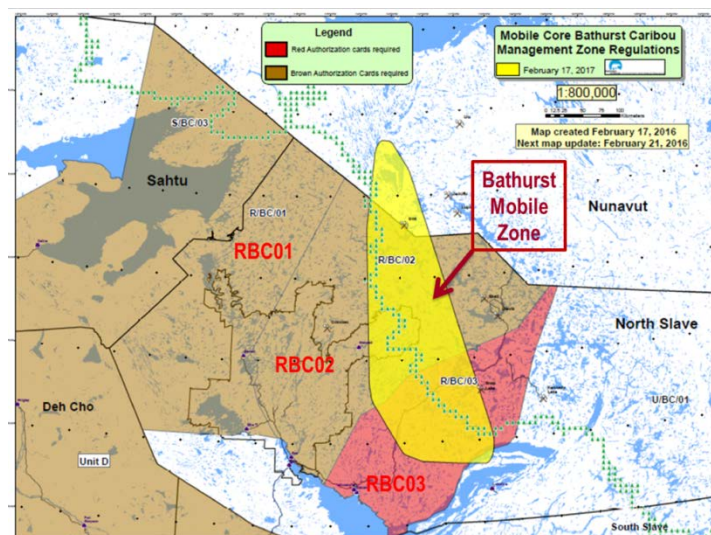


Figure 5. An example of the Mobile Core Bathurst Caribou Conservation Area (in yellow) in February 2016. The mobile zone polygon extends into Nunavut because some collared caribou were north of tree-line, but the mobile-zone has no management status outside NWT. RBC02 and RBC03 are the 2 large zones where Bathurst caribou harvest was limited to 300 in 2010-2014.

5. GNWT proposed harvest management for Bathurst herd

As noted in the current joint management proposal for 2016-2019 from the TG and GNWT to the WRRB, the two governments recommend that Aboriginal harvest of Bathurst caribou remain at 0 in the NWT, subject to annual review and as further information becomes available. Resident and commercial harvest would remain closed. The main reasons for recommending a 0 harvest are as follows:

- The herd has declined by 96% since 1986. Between 2012 and 2015, the herd declined rapidly from about 35,000 to about 20,000 animals, and the abundance of breeding females declined by ~23% per year, which corresponds to a halving time of ~3 years. Key population indicators such as late-winter calf: cow ratios, estimated cow survival rate, and recent pregnancy rates are consistent with a declining trend, and further herd decline appears likely.
- Although a "red zone" population size, below which all harvest would be closed, has not been established or agreed to for the Bathurst herd, there is precedent for closing all harvest from other caribou herds that have reached very low numbers:
- All harvest of the Cape Bathurst herd in the Inuvik region has been closed since 2007 due to very low numbers in 2006 at ~2,000 animals, after declining from peak numbers of ~19,000 in 2000. (Wildlife Management Advisory Council (NWT) recommendation, implemented by GNWT).
- The Harvest Management Plan for the Porcupine caribou herd which was finalized in 2010 (PCMB 2010) has a "red zone" threshold at 45,000 caribou, below which harvest would be closed. Surveys indicate this herd has generally not exceeded 200,000 at peak abundance. In this case the red zone is at about 23% of peak numbers.
- A management plan developed by the Advisory Committee for Cooperation on Wildlife Management for the Cape Bathurst, Bluenose-West and BNE herds in 2014 (ACCWM 2014) similarly established "red zones" for these 3 herds, although the plan does not specifically call for complete harvest closure if the herds are below these thresholds. For these three herds, peak estimated numbers and the red zone thresholds are, respectively: Cape Bathurst peak 19,000 and red zone 4,000 (21.0% of peak); Bluenose-West peak 112,000 and red zone 15,000 (13.4% of peak); BNE peak 120,000 and red zone 20,000 (16.7% of peak).
- By comparison with other herds, the Bathurst herd is at about 4% of its largest observed herd size in 1986 and may decline further. Thus TG and ENR recommend that the Bathurst herd should not be harvested for the next 3 years until the next calving ground survey in 2018 provides further information on the herd status at that time, with annual re-assessment based on review of new information about population status.

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Due to the Bathurst herd's historically low numbers and declining trend, GNWT recommends that there be no harvest in Nunavut until the herd shows clear signs of recovery, to maintain a consistent approach to management of this herd and to respect the sacrifices made by Aboriginal harvesters in the NWT in suspending harvest of this herd.

References:

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<http://www.pcmb.ca/PDF/general/Plan/Harvest%20Management%20Plan%202010.pdf>