Northwest Territories Environment and Natural Resources

SEP 2 2 2015

Mr. Grant Pryznyk, Acting Chair
Wek'èezhìi Renewable Resources Board
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Dear Mr. Pryznyk:

Management Recommendations for Bathurst and Bluenose-East Caribou Herds for Considerations during the WRRB meeting Sept. 23-24, 2015

Recognizing that your board is meeting this week, we would like to follow up on ENR discussions held this summer and fall with staff of the Wek'èezhìi Renewable Resources Board (WRRB) and Tłı̨chǫ Government (TG) on the status of the Bathurst and Bluenose-East caribou herds, with management recommendations that could be put in place for the coming winter harvest season (2015-2016), and for the longer-term, for these two herds.

We recognize that the timelines are tight. We further recognize that the WRRB and other boards have processes they must follow. We fully respect these processes and will participate in them as required. ENR will continue working with TG to develop joint management proposals for both herds for submission to the WRRB this fall. We understand that the WRRB's processes may include public hearings if a Total Allowable Harvest (TAH) for a caribou herd has been proposed. In the interim, there is urgency in the low numbers and rapidly declining trend of these two caribou herds and we suggest that management actions need to be in place for the coming winter harvest season.

In this letter we would like to suggest a number of interim actions that could be taken in the short-term, until the WRRB and other boards have had the time to follow their processes, hold hearings and issue their recommendations. ENR has consulted with traditional users of the Bathurst herd on possible management actions, and these recommendations have been informed by that process. We have not yet consulted with traditional users of the Bluenose-East herd, and will do so before any management actions are determined.

We would like to thank the TG for their letter of Aug. 25, 2015 (copied to ENR) with caribou management recommendations. We have acknowledged many of the TG suggestions in our letter and we thank TG for defining their views on a number of difficult issues.

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1. Status of the Bathurst and Bluenose-East Caribou Herds

The June 2015 Bathurst herd calving ground photo survey has resulted in a preliminary estimate of 8,075 ± 3,467 breeding females. Total herd estimate is expected to be between 16,000-22,000 caribou in the Bathurst herd. Further analysis may refine these numbers slightly but there will be no substantive change. These numbers confirm the large decline suggested by a June 2014 reconnaissance survey over the Bathurst calving grounds. The estimate of breeding females is just over half the estimate of 15,935 ± 2,926 breeding females in 2012 when the herd was estimated at about 35,000 caribou. Fig. 1 shows the estimated numbers of breeding cows in the Bathurst herd from 1986 to 2015, all derived using the same photographic survey technique over the calving grounds. The decline in breeding cows from 1986 to 2015 was 96% and the annual rate of decline 2012-2015 was about 20%.

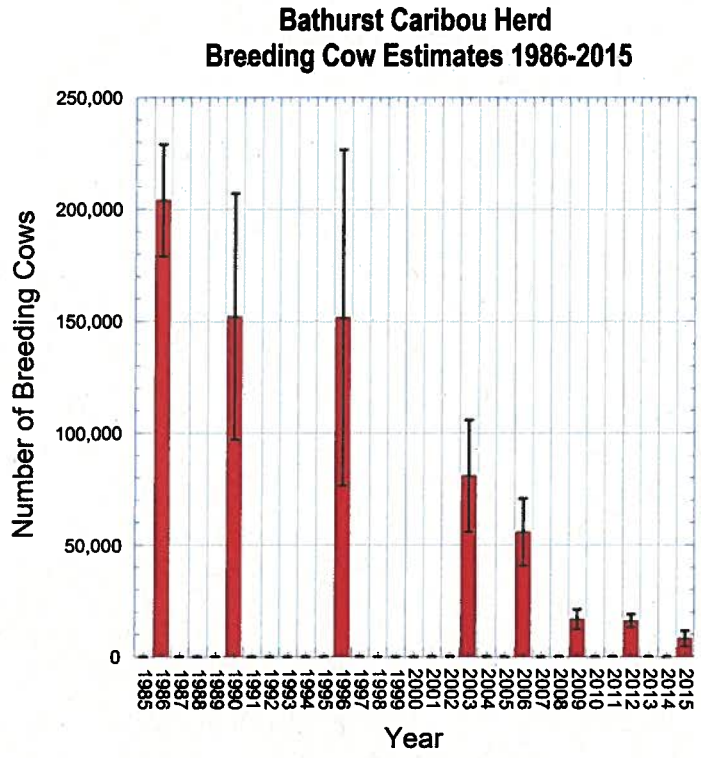

Fig. 1. Estimated numbers of breeding cows (± 95% CI) in the Bathurst herd 1986-2015.

Other demographic indicators for the Bathurst herd are consistent with a declining trend between 2012 and 2015: late-winter calf: cow ratios have averaged well 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 a low pregnancy rate in at least some years, including winter 2014-2015.

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The June 2015 photo survey of the Bluenose-East (BNE) caribou calving grounds showed a decline of more than 50% in just two years (Fig. 2), from 34,472 ± 4,363 (95% CI) breeding cows in 2013 to a preliminary estimate of 17,135± 4,363 in 2015. This represents an annual rate of decline of 31% for 2013-2015, an increase from the annual rate of decline of 12% seen between 2010 and 2013. The overall herd estimate will be available in late October and is expected to be between 35,000 and 40,000. The downward acceleration of the Bluenose-East herd's numbers is similar to the trend seen in the Bathurst herd between 2006 and 2009, when the annual rate of decline based on breeding cow estimates reached 33%. The 2015 photo survey results confirmed the steep downward trend in the Bluenose-East herd suggested by a June 2014 reconnaissance survey of this herd's calving grounds.

Other demographic indicators for the BNE herd in recent years are consistent with a declining trend between 2010 and 2015: late-winter calf: cow ratios have averaged well below 30 calves: 100 cows (ratios of 30-40 calves: 100 cows or greater are associated with stable herds), estimated cow survival has been well below the 80% needed for a stable herd, and there is evidence of a low pregnancy rate in at least some years, including 2010, 2012 and 2015.

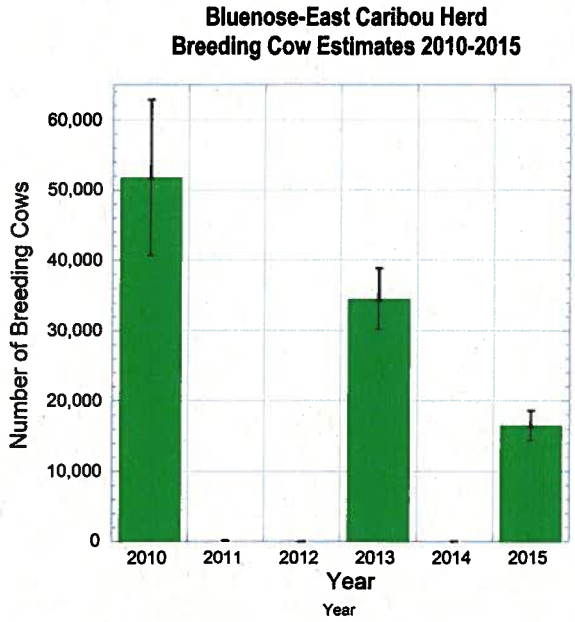

Fig. 2. Estimated numbers of breeding cows (± 95% CI) in the Bluenose-East herd 2010-2015.

ENR notes that the declining trend in the Bathurst and BNE caribou herds is consistent with generally declining trends in migratory tundra caribou herds in North America: George River and Leaf River herds in Quebec/Labrador; Qaminirjuaq herd in Nunavut; Bluenose-West herd in NWT (preliminary 2015 survey results); and the Central Arctic, Western Arctic and Teshekpuk herds in Alaska. The Porcupine herd is one of the few exceptions with an increasing trend.

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Given these alarming results from June 2015 surveys, ENR agrees with TG that interim and medium-term management options are needed for the Bathurst and BNE caribou herds.

2. Harvest Management – Bathurst herd

A harvest target of 300 Bathurst caribou with at least 80% bulls was recommended in 2010 by TG and ENR, then agreed to by WRRB and by separate agreement between ENR and the Yellowknives Dene First Nation (YKDFN) in 2010. At that time the herd was estimated at 32,000 with a rapidly declining trend. In their letter to WRRB Aug. 25, 2015, TG recommended a harvest target of 200 Bathurst caribou with at least 80% bulls, which would represent a harvest at a scale of 1% of the herd.

On this issue, ENR believes that the scale of the Bathurst herd's decline and continuing downward trend mean that all harvest should be closed until the herd clearly has stabilized and begun to recover. ENR proposes that a Mobile Core Bathurst Caribou Conservation Area (MCBCCA) again be established for winter 2015-2016. As was the case in winter 2014-2015, no caribou harvest would be allowed within this area, defined primarily by locations of collared Bathurst caribou and surveys, except for a limited ceremonial harvest.

ENR's rationale for continued harvest closure for the Bathurst herd is summarized below.

1. The herd has declined by 96% since 1986. Between 2006 and 2009 the herd rapidly declined by 75% from 128,000 animals to 32,000, and conservation measures were put in place. Between 2012 and 2015, the herd again rapidly declined from 35,000 to 20,000 animals, a further decline of 43% of the herd.

2. 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 decline appears likely.

3. 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 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, estimated at about 2,000, after declining from peak numbers of about 19,000 in 2000 (Wildlife Management Advisory Council WMAC-NWT recommendation, implemented by GNWT).
   - The Harvest Management Plan for the Porcupine caribou herd which was finalized in 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.

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- A management plan developed by the ACCWM for the Cape Bathurst, Bluenose-West and BNE herds in 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); Bluenose-East peak 120,000 and red zone 20,000 (16.7% of peak).

4. By comparison with other herds, the Bathurst herd is at about 4% of peak known herd size in 1986 and will likely decline further. ENR proposes that a management plan should be developed collaboratively for the Bathurst herd and that the threshold approach to establishing management actions used in the Porcupine Management Plan be considered during that process. In the interim, the Bathurst herd should be considered as being below a threshold for a "red zone" and should not be harvested.

3. Harvest Management – Bluenose-East herd

Following a number of meetings on Bathurst and BNE caribou in fall and winter 2014-2015, the ACCWM (Advisory Committee for Cooperation on Wildlife Management) in early 2015 recommended, and ENR accepted, a harvest limit for Northwest Territories (NWT) Aboriginal hunters of 1800 caribou from the BNE herd, with at least 80% of those being bulls, for the remainder of winter 2014-2015. Although the Nunavut harvest of this herd was not well documented, it was assumed to number up to 1000/year. After an unsuccessful attempt on a short timeframe to reach agreement on an allocation among NWT Aboriginal user groups of this herd and co-management boards, ENR determined an allocation for the herd in NWT. This was based in large part on recent documented harvest from this herd but also on several other criteria including access to other caribou. The allocation on February 6, 2015 included caribou already taken to that point, and the 1800 tags were to be shared as follows: Tłı̨chǫ 1100 (61.11%), Sahtu 480 (26.7%), Dehcho 45 (2.50%), Inuvialuit 25 (1.39%), NWT Métis Nation 40 (2.22%), Akaitcho 60 (3.33%), and North Slave Métis Alliance 50 (2.78%).

In view of the 2015 BNE caribou survey results showing an accelerated decline in the herd and the loss of about half the herd's breeding cows in just 2 years since 2013, ENR believes that continued harvest of up to 1800 caribou/year in the NWT (and up to 2800/year with the Nunavut harvest included) would add significantly to the herd's downward trend. This harvest needs to be reduced substantially.

After considering a number of factors, including:

- the TG recommendations of Aug. 25, 2015 to WRRB on BNE harvest,

- the ACCWM management plan that places the BNE in the orange declining phase where a Total Allowable Harvest acceptable to ACCWM can be established,
- ENR's harvest rule-of-thumb and associated modeling of harvest and caribou populations,
- the WRRB recommendations of 2010 for this herd, and
- the herd's much reduced numbers and its downward acceleration similar to the Bathurst herd's rapid decline between 2006 and 2009;

ENR agrees with TG's recommended harvest limit of 950 BNE caribou in total from the herd for 2015-2016. If the herd is assumed to number 37,500 (midway between the expected 35,000-40,000 total herd estimate), this is a harvest rate of 2.5% of the herd. ENR proposes, however, that this harvest be 100% bulls (with focus on young bulls) to recognize the paramount need to conserve the herd's breeding cows. Breeding cows are the single most important part of the herd if it is to stabilize and recover.

TG also recommended in the August 25, 2015 letter that an allocation formula based on the early 2015 ENR allocation be used to set the NWT BNE Aboriginal harvest at 611 caribou (Tlicho 373, Sahtu 163, Dehcho 15, Inuvialuit 8, NWTMN 14, Akaitcho 20, and NSMA 17). In the absence of any other allocation formula, ENR suggests that this sharing formula could be used again for winter 2015-2016. If a more comprehensive sharing formula agreed on by co-management boards and Aboriginal governments becomes available in time for this seasons harvest, then this formula could be replaced to reflect a formula accepted by all user groups.

TG's letter included a suggested allocation of 339 BNE caribou for Nunavut. This number is based on an estimate of Nunavut's harvest as a proportion of last year's overall harvest (1000/2800) applied to the recommendation of 950 for this winter. ENR has no wildlife management authority in Nunavut, and any recommendations on NU harvest of the BNE would need to follow a process appropriate to that territory's land claim and governance. The overall approach suggested by TG for allocation of BNE harvest appears reasonable, and GNWT will continue discussions with Government of Nunavut on a coordinated approach to management of this trans-boundary herd.

ENR has not yet had sufficient time to consult with all user groups and affected co-management boards on a BNE harvest limit but will do so in the near future. ENR commends TG for putting forward harvest recommendations for the BNE herd, a very difficult subject, and ENR is in agreement with these recommendations with the exception that we propose an all-bull harvest with emphasis on young bulls. ENR also agrees that more rigorous monitoring of caribou harvest by all users is needed, but notes that this is a shared responsibility. Accurate harvest reporting requires a commitment by all harvesters and communities as well as responsible governments and boards.

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4. Mobile Zones and Subzones

TG and ENR have discussed on a number of occasions the potential for developing management sub-zones to manage harvest, and possibly other activities, in the range of the Bathurst and neighbouring herds. Closing large zones (such as RBC02 and RBC03) to harvesting reduces caribou harvesting opportunities on a large scale and in some winters may also reduce access to harvesting Bluenose-East and/or Beverly/Ahiak caribou. Experience has also shown that collared Bathurst caribou may winter outside the large zones and be exposed to additional harvest pressure (e.g. Hottah Lake area in 2013). Among the advantages of the Mobile Core Bathurst Caribou Conservation Area established in winter 2014-2015 was that the overall area with restricted harvest was reduced from previous winters; in addition, the zone was defined by the herd's actual wintering grounds.

TG proposed in their August 25, 2015 letter that a set of sub-zones be developed that would replace the mobile Bathurst zone. Subzone boundaries could be based on landscape features that are easily recognized by hunters. Subzones could be open or closed to harvesting depending on the presence of Bathurst caribou. A number of subzones could be grouped to take the place of the mobile zone. This would allow for flexibility in managing harvest from the Bathurst and neighbouring herds. An example with 15 possible subzones was included in the TG Aug. 25, 2015 letter (Fig. 3).

ENR agrees that sub-zones along these lines may be well suited to a flexible approach to caribou management. However, some of the areas that would need to be included are in the Sahtu Settlement Area in the west and in Chief Drygeese and Akaitcho traditional lands in the east, and any changes to management zones would need to involve consultation in those areas as well as in Wek'èezhìı. Translating subzones into legally defined entities would also take some time. ENR suggests that over the course of the fall/winter of 2015/2016, subzones be explored further and refined as part of joint TG-ENR caribou management proposals. However, defining these zones, allowing for consultation and refinement, and turning the subzones into regulations cannot realistically be done in time for the winter 2015-2016 harvest season.

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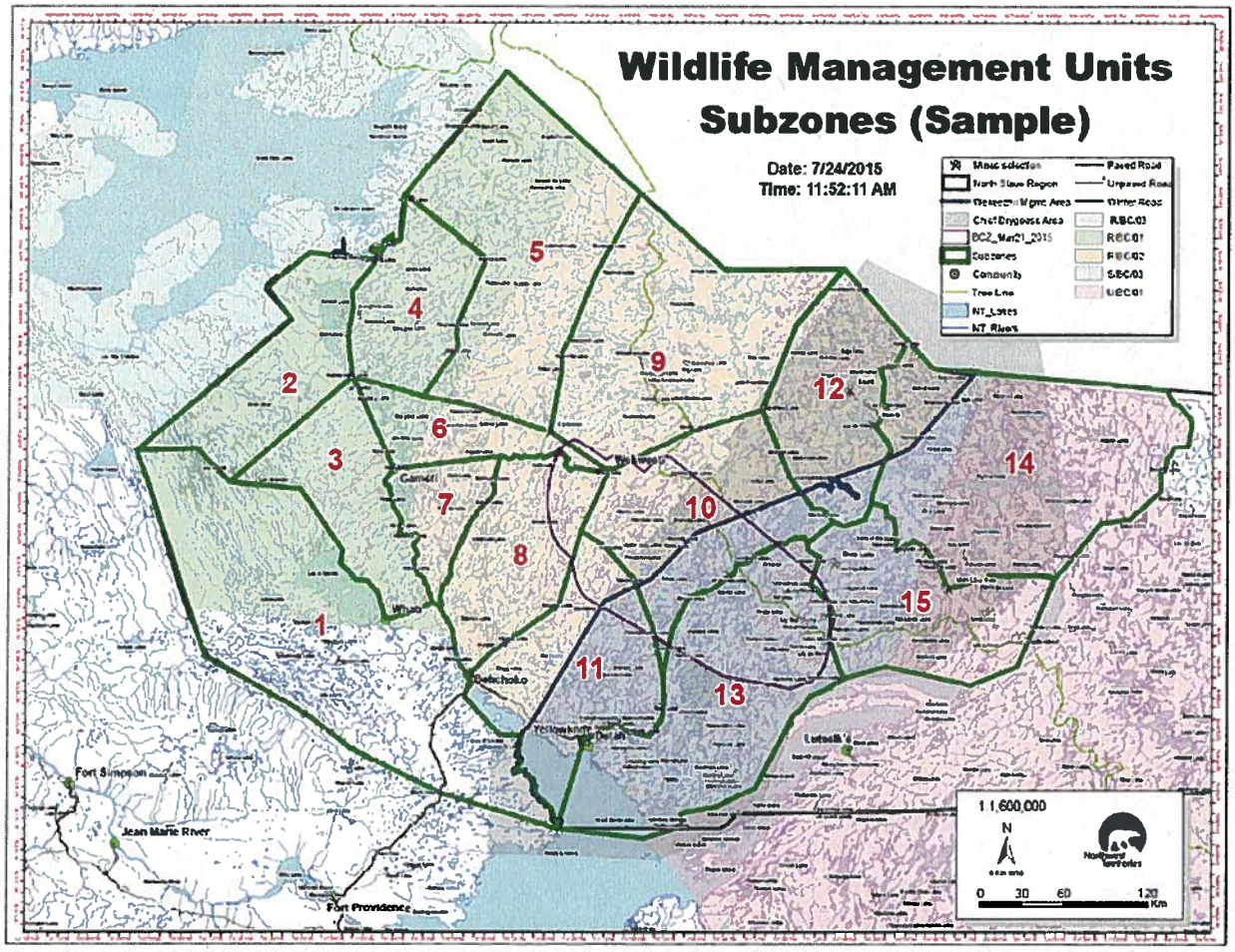

Fig. 3. An example of caribou management subzones that could be developed in the North Slave region (courtesy of TG letter to WRRB Aug. 25, 2015). An example of the Bathurst mobile zone from winter 2014-2015 is outlined in purple.

5. Authorization Tags

TG noted in their letter of August 25, 2015 that adjusting to the use of Authorization Tags for caribou presented challenges to Tłı̨chǫ harvesters in winter 2014-2015 and that more communication is needed between harvesters and GNWT on enforcement issues. ENR agrees that better communication is needed. Overall, the target should be to maximize acceptance of and compliance with harvest management objectives, and promote shared ownership of overall caribou management goals including accurate harvest reporting.

6. Predator Management

An earlier joint management proposal on caribou from TG and ENR in 2010 included provisions for increased harvest of wolves in the Bathurst range as a means of reducing adult and calf caribou mortality.

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A draft follow-up joint management proposal from TG and ENR (2014) included a renewed effort to increase wolf harvest around Tłı̨chǫ communities, with increased training and support for community members interested in hunting or trapping wolves. In their letter of August 25, 2015, TG notes that these efforts have to date not been effective. Many of the wolves taken were from community dumps and areas outside the Bathurst range. The wolf harvest has to date not been on a scale likely to make a difference to caribou survival rates in the Bathurst herd or other herds.

There were a number of discussions in fall 2015 between representatives of TG and ENR about further efforts to increase the wolf harvest in Bathurst and BNE caribou ranges. Measures under discussion for winter 2015-2016 include bringing in experienced wolf hunters and trappers from other communities to provide training to Tłı̨chǫ hunters and providing support for experienced wolf skinners. Consideration could be given to providing hunters with an incentive to shoot wolves and deliver them to a central location where they could be skinned by a professional skinner.

ENR recognizes that there are many factors that affect population trend in caribou herds, but management actions that will directly affect caribou survival rates are few in number. Increased wolf harvest is one of the few actions that may have such a direct effect. ENR agrees with TG that a feasibility assessment of potential wolf removal options is a key step in considering a more comprehensive predator management program to assist in the stabilization and recovery of the Bathurst herd, and potentially in the stabilization and recovery of the BNE herd. ENR will take the lead in winter 2015-2016 in conducting a thorough review of wolf research, monitoring and management options for the NWT. This will include a collaborative feasibility assessment of wolf management options in Bathurst and potentially Bluenose-East caribou range. ENR cautions that wolf removal programs elsewhere have been controversial and that public views on wolf removal are often highly polarized.

Monitoring

Monitoring of the Bathurst herd in recent years has been intensive and expensive for ENR. More generally, monitoring and management of barren-ground caribou has been the highest priority among ENR wildlife programs and has meant that resources for other species and other programs have been limited. The increase in numbers of collared caribou on the Bathurst herd in March 2015 from 20 on cows (20 total on the herd) to 30 on cows and 20 on bulls (50 total) has meant that defining the herd's ranges and movements can be done with greater confidence. The collared caribou locations have many other applications to management and research. ENR appreciates TG's support for this increase in collar numbers on the Bathurst herd. ENR and TG can explore options for additional collars, applications for the collar data, and greater access for TG to collar data, as part of the joint management proposals to be developed this fall.

7. Longer term management

ENR recognizes that management of Bathurst and BNE caribou requires more than short-term management of harvest. ENR has supported the development of management plans for all caribou herds that range in the NWT. In recent years this has included support for the development of the ACCWM plan for the Cape Bathurst, Bluenose-West and Bluenose-East herds (finalized 2014), the Beverly and Qamanirjuaq Caribou Management Board's updated management plan (finalized 2014), and the development and implementation of the Porcupine Caribou Harvest Management Plan (finalized 2010).

An overall management process for the Bathurst herd, potentially including a board, remains an outstanding need for this herd and is a requirement of the Tłı̨chǫ Agreement. Such a board could make recommendations about research, monitoring and management of harvest, predators and other factors that affect the herd. ENR has supported initial meetings of authorities with an interest in the Bathurst herd's overall management and will continue to support that process. ENR has also taken a lead role in developing a range plan for the Bathurst herd that would define acceptable limits to industrial development. ENR will continue to work with TG on caribou management proposals with a short-medium term focus.

ENR agrees with TG that a better understanding of the underlying drivers of change in caribou herd size and trend is needed. ENR has in recent years supported a number of studies focused on the Bathurst herd led by academic researchers. This has included studies of caribou winter range use in burned and unburned areas, the effects of insect harassment in the summer, on-going studies via remote sensing of changes in vegetation quality on the summer range, a study of dust around the diamond mines in the Bathurst range, and a study of the effects of the 2014 NWT fires on vegetation, including its value as caribou range. ENR would welcome suggestions from TG and WRRB on identifying key research questions for caribou, how best to pursue these questions, and on how to secure the necessary resources for research programs.

In conclusion, we hope that the information and recommendations in this letter will assist the WRRB in its deliberations on management of Bathurst and Bluenose-East caribou and clarify ENR's perspective on the caribou management recommendations described by TG in their letter of August 25, 2015.

Sincerely,

Ernie Campbell
Deputy Minister

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