

# NORTH SLAVE MÉTIS ALLIANCE

32 Melville Drive Yellowknife, NT X1A 0G2



July 19, 2018

JoAnne Deneron, Chair  
c/o Mark Cliffe-Phillips  
Mackenzie Valley Environmental Impact Review Board  
200 Scotia Centre, Box 938, 5102-50th Avenue  
Yellowknife, NT X1A 2N7  
Email: [mcliffephillips@reviewboard.ca](mailto:mcliffephillips@reviewboard.ca)

Ms. Deneron;

RE: North Slave Metis Alliance's Comments on "Consult to Modify" the Measures of the Tlicho All-Season Road Environmental Assessment (EA1617-01)

The North Slave Metis Alliance (NSMA) received a letter, on June 22, 2018, from the Government of the Northwest Territories (GNWT), Department of Lands, respecting their proposed modifications to the Measures in the Report of Environmental Assessment and Reasons for Decision (the REA) for the proposed Tlicho All-Season Road Project (TASR or the Project).

The NSMA has been a participant to the process since the preliminary screening stage in 2016. One of our main concerns has been the project's potential impacts on our members' s.35 Aboriginal right to harvest caribou, in particular, boreal caribou, in the area north of Great Slave Lake. In this respect, we have comments on the proposed modifications to Measures 6-1, 6-2, and 6-3.

*The Review Board's Significance Determination and Need for Measures 6-1, 6-2, and 6-3*

NSMA highlights that, in the REA, section 6.10.2, the Review Board makes two important observations concerning their determination that the Project will likely have significant adverse impacts on boreal caribou. The first is that boreal caribou are already at risk, and collectively, "any additional adverse impact from the Project is cumulatively significant" (PR#286 p.178). Second, the Review Board specifically "notes the lack of baseline information to be of particular concern because boreal caribou (t̓d̓zi) are a species at risk (p.179).

Following the significance determination, in section 6.10.3, the Review Board concludes that the monitoring and mitigation as proposed by the Proponent are insufficient, and further measures are necessary to mitigate the potential significant adverse impacts on boreal caribou. In doing so, the Review Board comments on two specific issues (p180):

1. That the GNWT has, in the past, failed to meet important deadlines: "The GNWT has already missed important deadlines for implementing range plans. The Review Board is concerned that the road will be constructed and be operational for an unknown period of time without the Recovery Strategy for the Boreal Caribou in the NWT being fully in place in the region of the Project to mitigate its impacts on boreal caribou (t̓ɔdzı)."; and
2. That specific mitigative actions and triggers are absent: "The adaptive management that is proposed by the developer lacks triggers, action thresholds and viable mitigative options. The mitigations below are required to further reduce or avoid the significant adverse impacts that are otherwise likely."

In that sense, it is important for the NSMA that the final measures will address the following issues specifically and adequately:

1. That the measures will address cumulative impacts from the development;
2. That there be an adequate dataset to implement good management;
3. That specific, binding, and achievable deadlines are set; and
4. That specific and viable mitigation actions are required.

Having the above in mind, the NSMA has the following specific recommendations for the Review Board's and the Minister's considerations.

*Measure 6-1, Part 1: Implementation of the Recovery Strategy for the Boreal Caribou in the NWT, and required range plans, for boreal caribou affected by the Project*

NSMA agrees with the importance of respecting the existing process of co-management, and has no objections to the related modifications in the paragraphs two and three respecting the co-management process.

The NSMA is concerned, however, that the modified management target lacks guidance for the threshold for management, and leaves the entirety of the work of setting the threshold to the future processes.

It is NSMA's view that 65% undisturbed habitat, as recommended by the National Recovery Strategy, is the most appropriate management target, given available scientific evidence. However, we do recognize that the GNWT does not have ultimate control over fires. In that sense, we propose the following wording for the third paragraph of the measure 6-1, part 1:

GNWT wording:

"GNWT will work with the Tlicho Government, and other relevant Aboriginal and federal land management authorities to manage, to the greatest extent possible, the amount of undisturbed habitat in the North Slave portion of the NT1 range to a threshold proposed by the GNWT-ENR, following engagement with Environment and Climate Change Canada and consultation with applicable Aboriginal groups, and approved in accordance with chapter 12 of the Tlicho agreement."

NSMA proposed wording:

"GNWT will work with the Tlicho Government, and other relevant Aboriginal and federal land management authorities to manage, to the greatest extent possible, the amount of undisturbed habitat in the North Slave portion of the NT1 range to achieve the National Recovery Strategy recommended threshold for critical habitat, or a threshold proposed by the GNWT-ENR, following engagement with Environment and Climate Change Canada and consultation with applicable Aboriginal groups, and approved in accordance with chapter 12 of the Tlicho agreement."

*Measure 6-1, Part 2: Information and adaptive management requirements*

NSMA has a significant concern with the proposed modification to remove abundance monitoring from this measure. We note that lack of critical information was one of the key reasons for the Review Board's significance determination and removal of abundance in particular can render difficult or impossible the effective designing and implementation of other mitigation measures (e.g. setting of sustainable harvest levels). NSMA is opposed to the removal of abundance from the measure 6-2, part 2.

For this specific issue, the NSMA contracted Zoetical Environmental Consulting to provide details of our concern. Their memo is attached as Appendix A.

*Measure 6-2: Temporary no-hunting corridor for boreal caribou (t̄dz̄i)*

Measure 6-2 is an important part of the set of mitigations that address the collective/cumulative impacts of the Project on boreal caribou. Implementation of a no-hunting corridor is the most specific, immediate, direct, and measurable mitigation among the set. While NSMA shares the GNWT's respect for the existing co-management process, in this case, the responsible board, the Wekeezhii Renewable Resources Board itself agrees with the original measure as written by the Review Board (PR#319).

Having that in mind, the NSMA is of the view that the measure 6-2 forms an integral and important part of the set of measures that would mitigate potential significant impacts from the Project, and that this measure be kept as originally worded by the Review Board.

*Measure 6-3: Habitat offset and restoration plan*

Similar to the measure 6-1 and 6-2, NSMA is of the view that the mitigation measures should, where possible, have specific guidance, and that this applies to decisions that are ultimately made through the WRRB process. It is important to note that participatory, evidence-based, and multi-year process on this issue has already taken place, and the Review Board concluded that the offset calculation should “at minimum, be based on the area of the right of way with a 2500 m buffer on each side.”

Recognizing the follow-up co-management process exists, the NSMA recommends the following wording for the first and second paragraph of measure 6-3:

The GNWT wording:

“The developer will offset effective boreal caribou (*t̥q̥dz̥l̥*) habitat lost because of disturbance from the Project. The developer, with the involvement of GNWT-ENR, will prepare and implement a habitat offset plan. This plan will describe how the required habitat offset area will be determined and how it will be achieved...”

NSMS proposed wording:

“The developer will offset effective boreal caribou (*t̥q̥dz̥l̥*) habitat lost because of disturbance from the Project. The developer, with the involvement of GNWT-ENR, will prepare and implement a habitat offset plan. The offset area, at minimum, will be based on the area of the right ow way with a 2500 m buffer on each side. The plan will describe how it will be achieved...”

The NSMA has no objections to other proposed modifications to measure 6-3.

*Conclusion*

As set out in the beginning, overall, the NSMA’s recommendations followed four key questions:

1. Do the measures, collectively, address cumulative impacts from the development;
2. Would there be an adequate dataset to implement good management;
3. Are there specific, binding, and achievable deadlines; and
4. Are there specific and viable mitigation actions?

The Review Board, in assessing project specific and cumulative impacts, determined that there would be a potential significant adverse impact on boreal caribou from the Project. In response, the Review Board issued a suite of mitigation measures that, collectively, addresses the potential impact. In reviewing the GNWT’s proposed modifications to the original measures, NSMA observed that, while each proposed modification may be minor in nature, collectively, the proposed modifications can render the suite of measures ineffective (e.g. removal of abundance measurement affecting other measures).

We believe that the recommended (NSMA) wording would address the issues, and trust that the above recommendations will aid in your deliberations for the final modified measures for this Project.

Sincerely,



Shin Shiga  
Manager, Environment

CC: Michael Conway, GNWT  
Mark Cliffe-Phillips, MVEIRB  
Tammy Steinwand, Tlicho Government

Appendix A

July 16, 2018

Mr. Shin Shiga  
Manager, Environment  
North Slave Métis Alliance  
32 Melville Dr. Box 340,  
Yellowknife, NT, X1A 2N3

## Re: Proposed Modifications to Measures for the Tłjcho All-Season Road Project

### Overview

The Mackenzie Valley Environmental Impact Review Board (MVEIRB) recently evaluated the Developer's Assessment Report and associated technical reviews for a proposed all-season road. The Tłjcho All Season Road (TASR) would connect Yellowknife to the Tłjcho First Nation community of Whati. Whati is a fly in/fly out community connected seasonally to Yellowknife via a winter ice road. At the completion of their review, the MVEIRB issued multiple mitigation and monitoring requirements to predicate the acceptance of the TASR project, including several requirements to ensure that impacts to boreal caribou, a Species at Risk, are strictly managed and tracked. The co-proponents of the project, the Government of the Northwest Territories (GNWT) and the Tłjcho government, have reviewed the measures included by the MVEIRB in their final report, and have requested several changes. One such change pertains to Measure 6-1, part 2, which calls for the monitoring of boreal caribou population trends and distribution. While the GNWT agrees with this requirement, they have argued that, "abundance" should be removed from the measure, as methods used by the GNWT do not provide an estimate of abundance.

### Issue/Position

The North Slave Métis Alliance (NSMA) has concerns about the request to remove abundance as a requirement of monitoring. The NSMA does not agree with the removal of this goal from the monitoring objectives and has retained Zoetica Wildlife Research Services Inc. (Zoetica) to comment on the importance of abundance as part of population monitoring for this species.

### Rationale

There are several thresholds and indicators of population stability that are used for boreal caribou population monitoring. For instance, a recruitment rate of 28.9 calves per 100 adult females is considered adequate to maintain the population, if the adult survival rate is 85% or greater (Rettie and Messier 1998, McLoughlin *et al.* 2003, EC 2008). Bergerud (1992, 1996) also reported that, in forest-dwelling caribou, a stable population requires a late-winter estimate of at least 12-15% calves per 100 adults in a non-hunted population. However, these authors coupled their recruitment estimates with a population density of 0.06 caribou/km<sup>2</sup>. In general, a measure of abundance/density is important in determining the capacity of a



woodland caribou population to deal with impacts to survival or recruitment. This is because, compared to larger populations, lower density populations are at greater risk of negative impacts. If something occurs that impacts survival or recruitment rates, a higher proportion of the population are impacted in low density populations, leading to faster population-level responses. Recruitment and survival rates can vary dramatically between years, and frequent surveys and measurements should be conducted to establish clear directional trends, with measures of survival and recruitment placed within the context of population abundance and density over a larger region. Without understanding abundance, population resilience cannot be understood. Simply put, large populations are far more robust in withstanding “bad years” or short-term impacts than small populations.

Zoetica fully recognizes the difficulty in obtaining abundance measures for boreal caribou. Zoetica recently worked on determining the abundance of boreal caribou within the far north of Ontario, in an area with population densities that we estimated at approximately 0.007 caribou per square kilometre. To obtain a sufficient sample size of caribou groups (the independent measure, rather than animals themselves), we needed to survey transects covering 34,000 km<sup>2</sup>, with a Tau 2 infrared sensor mounted within a Gimbal to the underside of a fixed wing aircraft (to increase detection via remote sensing assistance). We were then able to use distance based sampling to fit detection function models to our data with a good fit. Using model averaging, we were able to obtain abundance estimates, although they still had a large standard error. We learned the following from this recent work:

1. Obtaining abundance estimates is possible for boreal caribou even when they are at very low densities. However, obtaining such estimates requires surveying a sufficiently large area such that enough groups are observed to fit to detection models. Obtaining reliable estimates of detectability is key. The larger the area surveyed, the better the estimate will be. As there is a limited mid- to late- winter period, the use of multiple aircrafts surveying in tandem, with enhanced detection capabilities, such as the use of military and sub-military grade IR and remote sensing equipment, may be necessary;
2. Measurements of recruitment and adult survival are important as well; however, these vital rates can change quickly between years. The context of how those rates will influence population dynamics is best viewed from a perspective that includes a backdrop of abundance.
3. Obtaining estimates of population abundance requires a large survey area and effort, and sufficient funding to government departments responsible for SAR monitoring.

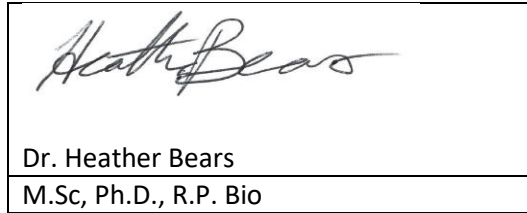
As the GNWT moves towards the development of range plans for boreal caribou in the North Slave region of the NT1 range, this may be a sufficiently large area over which to obtain abundance measures and apply them to make inferences about potential impacts of the TASR. However, the GNWT acknowledges that the range plan will require collaboration with, and endorsement by, Indigenous Governments and Organizations (IGOs) and that there is no guarantee of when, or if, it will be implemented. Therefore, in the absence of a Range Plan that can help to direct monitoring to the TASR, monitoring should be implemented to support the TASR, until a time at which a range plan over a larger area is in place and collecting similar information.

## Recommendations

We recommend retaining the goal of monitoring boreal caribou population dynamics, including abundance. We recognize that achieving this goal will require that funding be provided to the GNWT to enable the appropriate scale and effort of monitoring to enable the detection of sufficient group numbers



to enable the construction of a detection model, required for abundance estimation. If you have any questions or concerns about the recommendations or rationale herein, we would be pleased to discuss this further with interested parties.



## Literature Cited

Bergerud, A.T. 1992. Rareness as an antipredator strategy to reduce predation risk for moose and caribou. Pages 1008-1021 in Mccullough, D.R., Barrett, R.H. editors. *Wildlife 2001: Populations*. Elsevier Scientific Publications Ltd., London. 163 pp.

Bergerud, A.T. 1996. Evolving perspectives on caribou population dynamics, have we got it right yet? *Rangifer. Special Issue 9*: 95-115.

Environment Canada [EC]. 2008. Scientific Review for the Identification of Critical Habitat for Woodland Caribou (*Rangifer tarandus caribou*), Boreal Population, in Canada. Ottawa, Ontario, Canada. 238 pp.

McLoughlin, P.D., Dzus, E., Wunes, B, and S. Boutin. 2003. Declines in Populations of Woodland Caribou. *J. Wildlife Management*, 67: 755-761.

Rettie, W.J., and Messier, F. 1998. Dynamics of woodland caribou populations at the Southern limit of their range in Saskatchewan. *Canadian Journal of Zoology*, 76: 251- 259.