Topic: Evaluating Cumulative Effects

Reviewer Preamble:

A stated goal of the DAR was to evaluate the potential for the Mackenzie Valley Highway Project to contribute to cumulative effects for a range of Key Lines of Inquiry (KLOIs), Valued Component (VCs), and other considerations. Mention of consideration, evaluation, and mitigation of potential contributions of cumulative effects is commonplace throughout the DAR; indeed, the term "cumulative effect" occurs 1,319 times in the DAR.

Section 4 in the DAR details that cumulative effects are assessed as potential "Additional incremental effects resulting from residual effects of the Project combined with the effects of reasonably foreseeable future and certain current projects and activities…" (section 4.6). Effects are measured against a baseline of existing conditions (section 4.4), and interpreted as the severity, likelihood, and direction that accumulating effects contributed by the Project and other subsequent change that cannot be reasonably addressed or controlled with known mitigation measures may interact to exert change (sections 4.5, 4.6.2, 4.6.3, 4.6.4, and 4.7). In this case, the timeline across which cumulative effects are considered is forever because the operation and maintenance phase of the Project is "…indeterminate as the highway is intended to be permanent infrastructure." (section 4.3.3.2).

The Délı̨nę ʔehdzo Got'ı̨nę (also known as the Délı̨nę Renewable Resources Council, "DRRC") notes three concerns with the DAR's approach to cumulative effects assessment for this Project. First, the baseline data used to assess existing conditions for environmental considerations is not comprehensive and not reflective of our experience. Overall, very little data were used to assess existing conditions, and most of that information was collected by the GNWT or their consultants. Virtually no consideration was given to Dene ts'ı̨lı̨, Sahtúot'ı̨nę experiences or Sahtúot'ı̨nę perspectives on animals and habitat, or to the wellknown ebbs and flows of animals on the landscape (e.g., population dynamics and wildlife space use, landscape and habitat conditions, and natural cycles of environmental conditions). For example, Appendices 12A, 13A & B, 14A, 15A & B & C, 16A, 17A, 18A & B, 19A, 20A & C) list the data used to determine existing environmental conditions; few of those resources are from Indigenous participants, and virtually none are from Délı̨nę.

The second concern the DRRC has with the DAR's approach to cumulative effects assessment is the "forever" timeframe across which cumulative effects were considered against what the DAR considered to be reasonable and foreseeable future development. Section 26.2.1 considers future projects to be reasonably foreseeable if they "(a) have obtained the necessary authorizations to proceed or are in the process of obtaining the required authorization, or (b) have been publicly announced with the intention to seek the necessary authorizations to proceed". The DAR then suggests there are no reasonably foreseeable projects that will exert significant, adverse cumulative effects that interact with the Highway Project. This seems disingenuous. Even a casual reading of the news points to a broad Canadian interest in developing critical minerals and hydrocarbon resources. Indeed, Appendix 1A lays out the Business Case for the Project, and in various locations the DAR points to the Project as explicitly supporting further exploration and development activity. For example, Section 9.9.5.12 states:
"Operations and maintenance of the Project as a all-season form of ground transportation may cause changes in a number of non-traditional resources within the LAA and perhaps RAA, including minerals, oil and gas industries. In particular, oil and gas claims in the Norman Wells – Tulita axis as well as lands with high hydrocarbon potential throughout the Sahtu Region may be spurred to develop due to the Project. Operations and maintenance of the Project will make the development of mineral/oil and gas opportunities (via oil and gas rights and mineral rights) more affordable and therefore more likely.

Norman Wells has a long history of oil extraction and production; and there is moderate/low hydrocarbon potential directly surrounding the Hamlet of Tulita. In terms of minerals, there is an undeveloped lead and zinc deposit located 10 km southwest of Wrigley. Though mineral exploration and extraction has been low in the Sahtu Region, the greater region includes four geological provinces (Arctic Platform, Bear, Cordillera and Interior Platform) with lead, zinc, iron, copper, silver, uranium, lithium, cobalt, diamonds, tungsten and emerald potential. Tulita and Norman Wells are found within the Interior Platform geological province. Additional details on existing resource use are provided in Appendix 9C, Section 5.1.

To date only a small fraction of the proven mineral, oil and gas reserves have been developed in the Sahtu Region, largely for economic reasons. Colville Lake community members believe the Project will allow for easier access to mineral resources, and individuals from Norman Wells feel it will be more economical for companies that have mineral rights in the Sahtu Region."

The assertion in the cumulative effects sections that the Project will not have ramifications for additional land use change is inconsistent with these statements about the road clearly opening up the area to development.

The third concern the DRRC has is that the DAR gives little attention to monitoring for cumulative effects or changes associated with the Project. Section 23 describes that, in essence, "monitoring will occur". Specifically, Section 23.5 states that for environmental concerns, "…effects monitoring to verify the accuracy of predictions and implemented mitigation measures" is to occur, but provides little detail about what will be monitored, how things will be monitored, when monitoring is to occur, or specifically what triggers a monitoring need (section 23.6). More importantly, it is unclear from the DAR what actions may be taken or when any actions may be triggered in cases where unintended or unforeseen cumulative effects are observed. In discussing assessment of cumulative effects on socio-economic VCs, Section 9.13 states, "Readers are therefore advised to consider the cumulative effects assessment as being based on the information available at the time of the assessment and may require reassessment when the timing of the project construction and other reasonably foreseeable projects and activities are known in more detail".

Simply stating that monitoring will be done is not enough, we need a clear monitoring plan in place for how, when and by whom monitoring will be done and what baselines are being used for each element to assess cumulative impacts.

Reviewer Request:

1.1 Please provide the basis upon which the GNWT determined that a static baseline of existing conditions would be considered sufficient on which to evaluate future changes associated with cumulative effects contributed by the Project.

> 1.1.a. What steps is the GNWT taking to gather additional information on ecological trends, natural cycles, and past and ongoing changes so that the MVEIRB and parties can have a longer-range understanding of baseline conditions under the rapidly changing conditions associated with climate change?

1.2 Please provide the GNWT's rationale for not using Dene ts'ı̨lı̨ and other Indigenous Knowledge to establish past and current conditions.

1.3 How will the GNWT measure the effects of the project relative to additive and multiplicative effects of:

1.3.a. Climate change, and
1.3.b. Wildfires and changing wildfire patterns?

1.4 Please provide the GNWT's rationale for the DAR statement that the Project will not directly contribute to additional land use change associated with resource exploration and development given the evidence that a road will clearly open up the Sahtú to development.

1.5 Please detail, explicitly, how the GNWT will include the perspectives of the DRRC and Sahtúot'ı̨nę harvesters in continuous monitoring to evaluate and interpret environmental change and cumulative effects associated with the Project.

1.5.a. In particular, please provide details on what will be monitored, and how and when monitoring will occur.
1.5.b. How does the GNWT plan to engage with and directly involve the DRRC, the Délı̨nę Got'ı̨nę Government (DGG), and Sahtúot'ı̨nę harvesters to develop monitoring plans and protocols, collect information, and interpret change as it relates to cumulative effects?

1.6 Please detail the funding and capacity support that the GNWT plans to provide to the DRRC and the DGG to participate in ongoing monitoring related to cumulative effects.

Response from the Government of the Northwest Territories:

1.1 The Government of Northwest Territories (GNWT) agrees that ecological conditions are not static. For example, the reviewer is directed to the GNWT's response to Mackenzie Valley Environmental Impact Review Board (MVEIRB) Information Request (IR) #2, which discusses potential future environmental conditions in response to climate change. The IR response concludes that there could be both positive and adverse changes in the Local and Regional Assessment Areas (LAA and RAA) for valued components (VCs), but that these predictions are made with considerable uncertainty. The GNWT has taken into account that over the indeterminate, long life of the Project, there will be changes in future environmental and habitat conditions in the Northwest Territories (NWT) and within the LAA and RAA. Specifically, measurable parameters of climate change (e.g., air temperature, active layer depth, precipitation, permafrost extent) are some of the variables that may contribute to changes in VCs over the long-term operation of the Project. Potential yet uncertain changes to baseline environmental and habitat conditions have been acknowledged in the Developer's Assessment Report (DAR) (Sections 10.7.2 [caribou and moose], 14.7.2 [terrain, soils, and permafrost], 15.7.2 [water quantity], 17.8.2 [fish and fish habitat], 18.7.2 [vegetation and wetlands], 19.7.2 [wildlife and wildlife habitat], and birds and bird habitat [20.7.2]). It is the GNWT's view that, for the purposes of environmental assessment, the description of current conditions is adequate and appropriate to predict Project effects and proposed management plans are likely to be effective, and conclusions can be relied upon.

1.1a In acknowledgement of changing climate conditions, the climate profile for the Project was recently updated to reflect more recent data and models, and local and Traditional Knowledge (Mackenzie Valley Highway Project – Climate Change Resilience Assessment [CCRA] Addendum [K'alo-Stantec, 2024]). Sections 3.1 and 3.2 of the CCRA Addendum summarize available Traditional Knowledge about long-term environmental changes in the regional area of the Project, providing holistic regional descriptions of observed changes in and related to meteorology and climatology as they relate to risks to the Project infrastructure.

The GNWT's focus of ongoing, Project-specific monitoring is to: (1) determine whether proposed mitigation measures have been implemented; and, (2) evaluate the effectiveness of mitigation measures. Project-specific and regional data collection of relevant parameters is needed to inform this. The GNWT does not consider this "baseline" information, as the data and information collected has a specific purpose to relate the observed conditions to the Project's effects over a specific study area. Over the life of the Project, the GNWT will collect and evaluate data and information needed to support adaptive management, such as described in the draft Wildlife Management and Monitoring Plan (Developer's Assessment Report [DAR] Volume 5, Section 5 and 6) and the Permafrost Protection Plan (DAR Volume 5; Section 9 and 10). Also, through other, existing, non-project-specific initiatives such as the NWT Cumulative Impact Monitoring Program (CIMP), the GNWT will continue to collect and compile available regional physical and ecological data to report on the state of the environment and trends in the NWT (e.g., Environmental Trends | Environment and Climate Change (gov.nt.ca)). The NWT CIMP provides funding to eligible research and monitoring projects based on an annual review of submitted proposals.

1.2 Traditional Knowledge has contributed to the description of existing conditions throughout the

DAR. Please refer to Section 3.2 of the DAR for a description of the sources of Traditional Knowledge, and methods used to integrate Traditional Knowledge into the assessment. The GNWT has committed to continuing engagement with Indigenous Governments, Indigenous Organizations, and other affected parties, and Consultation with Indigenous Governments and Indigenous Organizations and to review additional Traditional Knowledge as it is made available in the context of the Project.

1.3 As detailed in the GNWT's response to MVEIRB IR #2, the GNWT acknowledges that natural conditions will change over the life of the Project. Updated climate profile projections for the Project consider changes in temperature, precipitation, frost days, freeze-thaws, ice accretion, wind, wildfire, and permafrost (K'alo-Stantec 2024). These updated projections in combination with a literature review of potential climate-related changes to vegetation and wildlife habitat, suggest there could be both positive and adverse changes in the local and regional assessment areas (LAA and RAA) for VCs. These predictions are made with considerable uncertainty. In acknowledgement of uncertainty associated with predicting effects over a long timeframe, the GNWT has proposed various programs of additional monitoring, evaluation and response as part of an adaptive management process to manage the effects of the Project on the environment over the long term.

1.4 Please see the GNWT's response to MVEIRB IR #51 regarding the GNWT's position on the consideration of potential future development in the present environmental assessment.

1.5 Response to 1.5a and 1.5b are as follows:

1.5a. Referring to part B, details of monitoring, including roles and responsibilities, other than what is currently proposed in the draft management plans, will continue to be developed with input from Indigenous Governments, Indigenous Organizations, and other affected parties.

1.5.b The GNWT has committed to ongoing engagement with Indigenous Governments, Indigenous Organizations, and certain other affected parties on the development of management and monitoring plans such as the Wildlife Management and Monitoring Plan (WMMP). The format of engagement is not yet confirmed but could be a working group-type format. The GNWT has recently started gathering input from the various organizations about how they would like to be engaged in the development of the WMMP and other plans, as appropriate.

1.6 The implementation of Project specific monitoring programs is contingent on several considerations, including: discussions during the environmental assessment; what monitoring may be recommended by MVEIRB and ultimately accepted through the final Ministers' decision on the Report of Environmental Assessment (REA); a formal decision by the GNWT to advance the project to construction; and, receipt of funding to construct the Project.

The role of community wildlife monitors in implementing aspects of the WMMP will also be described following input from Indigenous Governments, Indigenous Organizations, and other affected parties.

Without knowing the outcome of the above, the GNWT is unable to make additional commitments beyond those already in the DAR, which is to provide the base funding to support the work of the Mackenzie Valley Highway Corridor Working Group (See section 9.16 for a summary).

References

K'alo-Stantec. 2024. Mackenzie Valley Highway Project –CCRA Addendum (update to Mackenzie Valley Highway Project Climate Change Resilience Assessment [2021]). Prepared for Government of the Northwest Territories Department of Infrastructure.

DRRC02

Topic: Holistic perspective and management of the land

Reviewer Preamble :

The Mackenzie Valley Highway Project -Developer's Assessment Report (DAR) considers the potential for the Mackenzie Valley Highway Project to impact a range of Key Lines of Inquiry (KLOIs), Valued Component (VCs) (Sections 10 and 12 -21, inclusive, and Appendices 12A, 13A & B, 14A, 15A & B & C, 16A, 17A, 18A & B, 19A, 20A & C). The DAR also discusses a range of potential mitigation actions to address potential concerns and impacts in the aforementioned sections as well as in various Wildlife Management and Monitoring Plans (WMMPs; which are to be developed still) mentioned throughout (and see Appendices 19B and 20B).

The Délı̨nę ʔehdzo Got'ı̨nę (also known as the Délı̨nę Renewable Resources Council, "DRRC") appreciates this effort because all components of an ecosystem, including a range of wildlife species, their habitats, and various ecological cycles that can influence wildlife and their habitats, are important considerations. The DRRC also believes that land stewardship is not simply about one or two important factors or indicators – all species are important and deserving of wise stewardship.

While the DAR did consider a range of values, the DRRC is concerned that for many other values, insufficient information is available and Dene ts'ı̨lı̨ and other available Indigenous Knowledge have not been used to inform a meaningful evaluation of the impacts potentially associated with the Project for those values. In many cases population abundances and dynamics are simply unknown (e.g., for many fish species, furbearers, beavers, etc.), broadly estimated using models (e.g., for songbirds), or derived from infrequent, localized estimates that may not be relevant to other areas (e.g., caribou and moose). How can impacts and change be adequately evaluated if baselines are unknown or only coarsely known?

Further, the DRRC is concerned that the overall approach to evaluating impacts and cumulative effects associated with the Project is too narrowly focused on individual values in a vacuum and is a western-science driven research and monitoring agenda that is not inclusive of Indigenous perspectives of the land. The land is complex, but understanding and monitoring such complexity is at the core of meaningful and actionable monitoring and decision making. Informed and effective land management decisions are dependent on understanding and addressing ecological complexity, which must be done not just from a western science perspective but also from a Sahtúot'ı̨nę perspective. While Sections 4, 10, 11, 17 - 21 do describe attempts to address interactions among values, there is an overall lack of clarity and specificity about how this will be achieved. Importantly, the DRRC is not clear how the DRRC and Sahtúot'ı̨nę Harvesters will be directly involved in research and studies, despite this being mandated by section 13.8.40 of the Sahtu Dene Metis Comprehensive Land Claim Agreement (SDMCLCA). Section 2 simply states engagement is to occur and indicates that Indigenous environmental monitors are to be used and employed.

The DAR relies on a baseline that is a snapshot in time (Section 3.0 or 4.0 (Methods) of each Technical Data Report (TDR) for each of the VCs in Volume 2 and 3 (specifically, sections 10 and 12 -21, inclusive) and Appendices 12A, 13A & B, 14A, 15A & B & C, 16A, 17A, 18A & B, 19A, 20A & C, 22A, and 24A). This ignores the variations that occur overtime. To adequately assess impacts to VCs, we need a much broader, longer-range baseline that looks at variations over time and includes both western science and Dene ts'ı̨lı̨, which has been developed over many generations.

Within the Sahtú, there are a range of documents and strategies that outline how more meaningful and locally and culturally appropriate land stewardship can occur, such as the Sahtú Land Use Plan (2013), the revised Sahtú Renewable Resources Board Strategic Plan (2020-2025), and "Belare Wíle Gots'ę ʔekwę – Caribou for All Time – A Délı̨nę Got'ı̨nę Plan of Action" (the 'Caribou Plan'). The Caribou Plan was first adopted by the Délı̨nę Got'ı̨nę Government (DGG) in 2016 and the GNWT approved the Caribou Plan in February 2017. The Caribou Plan contains many of our Dene ʔeɂa (laws) related to wildlife and habitat and charts a path for monitoring and stewardship. While we understand that some of those pre-existing documents were used to guide the assessment of impacts (i.e., Section 4.3.2) and to reroute Project locations and/or include stricter mitigation considerations in certain areas (i.e., Section 5.2.3, Table 5.2; and Sections 6.2 and 6.3), more work must be done to ensure that the existing documents and Sahtúot'ı̨nę perspectives are fully integrated into the monitoring and WMMP development that is to occur during the construction and operation and maintenance phases of this Project.

Reviewer Request :

2.1 What are the GNWT's plans to establish improved baseline information to better capture a longer-range view of what a healthy ecosystem looks like?

2.2 How will the GNWT work collaboratively with the DRRC and the Délı̨nę Got'ı̨nę Government (DGG) to leverage the Project to fully implement our Caribou Plan?

> 2.2.a. How, specifically, will the GNWT integrate the strategies and ideas in our Caribou Plan with WMMPs to achieve multiple goals for monitoring?

2.3 How will the GNWT ensure data and information are collected to meaningfully monitor wildlife in a way that centers on Sahtúot'ı̨nę approaches and perspectives and Sahtúot'ı̨nę considerations for what constitutes healthy habitat and wildlife populations?

> 2.3.a. How will the GNWT integrate Dene ʔeɂa in monitoring and data collection plans so that information on wildlife is collected in appropriate ways? For example, the DRRC has repeatedly expressed to the GNWT its concerns about the impacts of collaring and helicopter monitoring activities on wildlife.
>
> 2.3.b How will the GNWT ensure that data and information that is collected with the participation of the DRRC and DGG is fed back into the broader monitoring mechanisms to evaluate and address unforeseen or unintended impacts and cumulative effects of the project?
>
> 2.3.c. How will the GNWT ensure that (i) monitoring, (ii) evaluation of impacts of the project, and (iii) adapting mitigation measures is done in a way that protects our Aboriginal and treaty rights and our Dene ts'ı̨lı̨.

2.4 What financial and capacity supports will the GNWT provide to the DRRC to enable us to (i) participate in study design, (ii) conduct monitoring, (iiI) engage and advise on research and study questions, and (iv) participate in the process to assess impacts and adjust mitigation measures as needed?

> 2.4.a. If the GNWT and the DRRC disagree about the interpretation of data collected or how to

interpret the information collected, how will those disagreements be resolved?

Response from the Government of the Northwest Territories:

2.1 Please see the Government of Northwest Territories (GNWT) response to Délı̨nę Renewable Resources Council (DRRC) IR #01, Part 1.1 and 1.1a, which address future environmental conditions and baseline information as they relate to the Project.

The request speaks very generally to what a healthy ecosystem looks like. The GNWT has existing programs, such as the Cumulative Impact Monitoring Program and Audit, that examine trends in baseline conditions for priority valued components (e.g., caribou, water, fish), and report on (among other things) how information about the environment is collected, and how cumulative impacts are monitored in the NWT. The GNWT, Department of Environment and Climate Change also reports on the state of the environment every four years to provide information on topics relevant to the environment, organized to better understand what has occurred over time and what changes one might expect in the future. The last report was completed in 2022 (GNWT 2022).

2.2 The GNWT acknowledges the referenced plan (DRRC, 2016). The principles of stewardship presented in the report are reflected in the project-specific Wildlife Management and Monitoring Plan (WMMP), particularly with respect to the need for ongoing monitoring and adaptive management using a co-management approach.

The GNWT notes that the referenced plan applies to ʔekwę́ - the Cape Bathurst, Bluenose-West, and Bluenose-East Barren-ground barren-ground caribou herds, whose annual range does not overlap with the Caribou and Moose Local Assessment Area (LAA). The GNWT's existing monitoring programs for barren-ground caribou will be used to track the annual range of barren-ground caribou to help determine whether their annual distribution shifts and starts overlapping with the Caribou and Moose LAA.

2.2a The GNWT looks forward to engaging Indigenous Governments, Indigenous Organizations and other affected parties, such as the Sahtú Renewable Resources Board, in the development of the WMMP. A draft WMMP is provided in Volume 5 of the Developer's Assessment Report (DAR).

2.3a. The GNWT will continue to engage with Indigenous Governments, Indigenous Organizations, and other affected parties, such as Renewable Resources Councils, during the development of the WMMP. A draft WMMP has been provided in Volume 5 of the DAR.

2.3b. Section 6 of the draft WMMP describes the proposed approach to adaptive management, including how stakeholders will collaborate to find consensus on the actions to be taken. The WMMP proposes the use of scientific information and Traditional Knowledge in adaptive co-management.

2.3c. See response to 2.3b.

2.4. The GNWT is unable to provide a definitive response at this time with respect to future financial and capacity supports that will be provided to Indigenous Governments in relation to project related implementation activities. The implementation of proposed mitigations in the DAR is contingent on several considerations, including:

- Mitigation discussions during the environmental assessment;
- Which mitigations are recommended by MVEIRB and ultimately accepted through the final

Ministers' decision on the Report of Environmental Assessment (REA);

- A formal GNWT decision to advance the project to construction; and
- Receipt of funding to construct the Project.

A fundamental aspect of the WMMP is LAA and RAA community participation in guiding study proposals, study design, monitoring, interpretation of study results and any adaptive management as needed.

2.4a. The GNWT will continue to engage with Indigenous Governments, Indigenous Organizations, and other affected parties during the development of the WMMP. In the approach to adaptive co-management described in Section 6.1 of the WMMP, the GNWT proposes that stakeholders will collaborate and reach agreement on a solution. The terms of reference for the working group will be collaboratively determined and can include a conflict resolution mechanism should the working group not agree.

References

Délı̨nę Renewable Resources Council. 2016. Belare Wíle Gots'ę ʔekwę – Caribou for All Time – A Délı̨nę Got'ı̨nę Plan of Action. 48 pp. (https://www.srrb.nt.ca/document-repository/1287-2016-009-deline-caribou-plan-approved-16-01-08-edition

Government of the Northwest Territories (GNWT). 2022. NWT State of the Environment Report 2022. Accessed September 16 at: wt_state_of_the_environment_report_2022.pdf (gov.nt.ca)

Topic: Impacts to and Mitigations for Caribou and Moose

Reviewer Preamble:

Caribou, including boreal caribou ecotype of woodland caribou (Rangifer tarandus caribou) and barren-ground caribou (Rangifer tarandus groenlandicus) of the Bluenose-East herd, and moose (Alces alces) have been identified as a valued component (VC) for the evaluation and mitigation of potential impacts in the DAR because of their importance to people and their potential to be affected by the construction and operation of the Mackenzie Valley Highway (i.e., DAR, Section 10). The assessment of effects on these animals is considered a Key Line of Inquiry (KLOI) in the DAR.

The DAR supposes that while there may be a range of impacts to the ecologies of caribou and moose, including habitat and habitat use (Section 10.4.1.1 and Appendix 10A, and Sections 18 and 19, respectively), movement (and by inference population level connectivity), mortality risk, and health (Section 10.4.1.2, and Appendix 10A), those affects will a) not be significant, and b) that any measurable changes that are observed will be adequately addressed using a range of recommended mitigation measures (i.e., Table 10.7) such that changes will remain within the bounds of expected ecological ranges.

The DAR states that "based on the species distributions, the Caribou and Moose LAA adequately captures the potential residual and cumulative effects of the Project interacting with the effects of other past, present, and reasonably foreseeable future projects." The Délı̨nę ʔehdzo Got'ı̨nę (also known as the Délı̨nę Renewable Resources Council, "DRRC") disagrees with this statement.

All potential impacts stemming from the Project, and mitigations thereof, were assessed within both limited spatial and ambiguous temporal scopes. Spatially, potential impacts were assessed within the Project Development Area (PDA; area of direct project disturbance), and a Local Assessment Area (LAA; area within a 15 km buffer from the proposed Project (section 10.1.4.1). This was done, as indicated in section 10.1.4., to "…balance between areas either too large and irrelevant to the scale of the Project, or too small and does not inform on regional habitat conditions." Further, the 15 km LAA matched ecological parameters (i.e., maximum 24 hr movement distance regionally, and caribou response to road types in northern BC) and other project evaluations (i.e., 15 km was also used during review of Tłı̨chǫ All-Season Road and the Inuvik to Tuktoyaktuk Highway Projects).Temporally, impacts were assessed, as indicated in section 10.1.4.2 for the highway construction phase (10 years over a 20-year timeframe roughly completed between 2041 – 2046) and for the highway operational and maintenance phase which is "…considered indeterminate as the highway is intended to be permanent infrastructure." From both western science and Sahtúot'ı̨nę perspectives both the spatial and temporal scopes do not address the life histories and ecological needs for these species.

Further, many generations of Dene ts'ı̨lı̨ and, in more recent years, western science has told us that both caribou (boreal and barren ground ecotypes) and moose exhibit complex relationships to their habitats and changes to those habitats and to subsequent changes in species relationships and interactions. All those changes have been shown repeatedly to be driven by both direct and indirect responses to habitat change as well as subsequent feedback loops in animal population change, distribution and habitat use.

The DRRC also disagrees with the information being used and how that information is being interpreted to estimate impacts. For example, section 10.2 stipulates that all current evaluation is based on existing conditions for caribou and moose which has been collected largely by the GNWT and other mostly western-science-based criteria (i.e., section 10.2, and the information complied in the Supplemental

Mackenzie Valley Highway Project, Technical Data Report—Caribou and Moose Prepared by EDI). Although the GNWT has incorporated some Indigenous perspectives and available information into decision making (i.e., section 5), it is unclear specifically which information from the DRRC and Sahtúot'ıneharvesters and Elders was incorporated or how it was used and contextualized. Section 10.1.6 describes that the thresholds to determine whether "a significant adverse residual effect" has occurred even after the "application of avoidance and mitigation measures" for measurable impacts on caribou and moose "1) causes or further contributes to the exceedance of a conservation-based threshold; or 2) threatens the long-term persistence or viability of caribou and moose populations in the Caribou and Moose LAA." Conservation-based thresholds are not an appropriate measurement given the requirements of the Sahtú Dene Metis Comprehensive Land Claim Agreement (SDMCLCA), Dene ʔeɂa (laws) about stewardship, and the Aboriginal and treaty rights in the Sahtú. Further, it is impossible to reasonably account for the long-term persistence or viability of caribou or moose forever into the future using only a snapshot of sparse current data.

Lastly, the mitigation measures listed (i.e., Section 5, and each constituent subsection here (i.e., 10.4.2.2, 10.4.3.2, 10.4.4.2, etc.) are hypothetical and narrowly focused on only direct impacts of the Project on caribou and moose (i.e., section 10.3, table 10.6) and assessment of direct of residual effects (i.e., section 10.4, table 10.7). Proposed mitigations may or may not work, and they do not adequately address many indirect effects on caribou and moose caused by roads that have been shown elsewhere. This ignores information from both western science and Dene ts'ı̨lı̨ on how animals respond to development and habitat disturbance, and amounts to a "mitigation guessing game" that assumes almost entirely that untested and unquantified actions can prevent or undo real and known cause and effect relationships. Note also that the Délı̨nę Got'ı̨nę Government (DGG) adopted the "Belare Wíle Gots'ę́ ʔekwę́ – Caribou for All Time – A Délı̨nę Got'ı̨nę Plan of Action" (the 'Caribou Plan') in 2016 and the GNWT approved the Caribou Plan in February 2017. The Caribou Plan contains our Dene ʔeɂa (laws) on stewardship and our relationship with caribou and moose (and other species) and could be a trail-map for how to conduct monitoring.

Reviewer Request:

3.1 Please explain why the GNWT did not include indirect impacts on caribou and moose in the assessments of thresholds and mitigations in the DAR.

> 3.1.a. Animal populations and distribution change over time and impacts in one area can influence how animals respond in other areas over long time frames and broad spatial scales. For example, Sahtúot'ınę and western scientists alike know that predators like wolves can travel further and faster along linear features such as roads to give them broader access to caribou habitats and increased predation over the long-term and at spatial scales well beyond immediate linear footprints. Please explain why the GNWT did not consider these ecological patterns in the DAR, especially because the road is intended as permanent infrastructure.

3.2 What information was considered from the DRRC and Sahtúot'ınę harvesters and Elders in (i) assessing impacts to caribou and moose in the DAR and (ii) evaluation of the efficacy of selected mitigation measures?

3.3 Please provide the GNWT's rationale for why a 15 km LAA in perpetuity is sufficient to address impacts to caribou and moose.

3.4 Assuming measurable impacts are observed in caribou and moose that were not anticipated or mitigations do not work to resolve problems as anticipated, what mechanisms will the GNWT use to enact new mitigation measures?

3.4.a. How does the GNWT plan to directly involve the DRRC, Délı̨nę Got'ı̨nę Government and Sahtúot'ı̨nę harvesters in those mechanisms?

3.5 How does the conservation-based threshold (section 10) enable provision of the Sahtu Minimum Needs Level as outlined in the SDMCLCA?

3.6 How does the conservation-based threshold relate to the Caribou Plan?

3.7 Please explain how the GNWT considered Sahtúot'ı̨nę perspectives and Dene ts'ı̨lı̨ in deciding that a conservation-based threshold was an appropriate threshold to use.

3.8 Given the GNWT's obligations under section 13.8.40 of the SDMCLCA to directly involve the RRCs and harvesters when the GNWT conducts wildlife research or harvesting studies, what process does the GNWT intend to use to include the DRRC and Sahtúot'ı̨nę harvesters in monitoring the effects of the project?

3.9 What funding and capacity supports does the GNWT intend to provide the DRRC, DGG, and Sahtúot'ı̨nę harvesters to ensure they can effectively directly participate in research and monitoring related to the impacts of the project?

3.10 How will the GNWT incorporate the ideas and strategies outlined in the Caribou Plan into the monitoring of effects of the project and adapting mitigation measures based on what is found?

Response from the Government of the Northwest Territories:

3.1 The Developer's Assessment Report (DAR) Section 10.4, Assessment of Residual Effects on Caribou and Moose assessed indirect effects on caribou and moose. In this section, effects due to indirect changes in habitat (i.e., avoidance), mortality risk, and health are discussed in detail, including residual effects following the application of mitigation measures. Thresholds for indirect habitat change are discussed and correspond to zones of influence or distances from the Project within which habitat quality is altered. In the DAR, the following thresholds for indirect habitat change were used: 500 metres (m) for boreal caribou and 250 m for moose. Additional thresholds were evaluated in responses to Mackenzie Valley Environmental Impact Review Board (MVEIRB) Information Request (IR) #47 (boreal caribou) and #48 (moose). However, assessment of thresholds for indirect changes to mortality risk and health were not included due to limited information, evidence, and guidance on the topic.

> **3.1a** The Government of Northwest Territories (GNWT) acknowledges the agreement among Sahtúot'ıné and western scientists' observations that predators like wolves can travel further and faster along linear features. To address the technical component of the request, disturbance-mediated apparent competition and facilitated predation are unlikely to be a high result in northern boreal regions due to relatively low net primary productivity and low densities of alternative prey and predators (Neufeld et al. 2021, Superbie et al. 2022). Facilitated predation has primarily been documented along seismic lines and trails that humans infrequently use; most predators do not seem to travel along high-grade, maintained roads such as highways (Dickie et al. 2020). Wolf movements along roads are typically associated with lower levels of human activity and disturbance (Ehlers et al. 2014). Studies that have demonstrated increased wolf movements along roads also tend to lump together roads with other linear feature types like seismic lines (Mumma et al. 2018, DeMars and Boutin 2018). Additionally, positive responses (i.e., selection) to roads tends to occur when road density is high (Mumma et al. 2019). Overall, the likelihood of the Project facilitating wolf travel is not expected to be high.

3.2 The DAR, Section10.1.2 (Influence of Engagement) summarizes the information, concerns, and recommendations shared by Indigenous Governments, Indigenous Organizations, and other affected parties related to caribou and moose. The Délıné Renewable Resources Council (DRRC) and Délıné Elders have valuable knowledge to provide, but specific knowledge about ʔekwé (barren-ground caribou) was not integrated into the assessment because the Caribou and Moose LAA does not overlap with the current annual range of Bluenose-East barren-ground caribou (see Figure 10.3 in DAR Section 10.2.2.2). The GNWT will engage Indigenous Governments, Indigenous Organizations, and other affected parties in the ongoing development of the Wildlife Management and Monitoring Plan. This will include appropriate input from Délıné representatives.

3.3 Potential effects on caribou and moose were assessed at broader scales in the cumulative effects assessment (DAR Section 10.5) and the Project-specific assessment at the Caribou and Moose Local Assessment Area (LAA) scale. A discussion on spatial scale and study extent for caribou and moose, as well as an explanation of why the Caribou and Moose LAA is appropriate, is provided in the GNWT's response to MVEIRB IR #44.

3.4 The mechanisms to enact new mitigation measures are outlined in Section 6 of the Wildlife Mitigation and Monitoring Plan (WMMP). An adaptive co-management approach will be taken that ensures stakeholder collaboration to develop mitigation solutions using both scientific and Traditional Knowledge. During the Project's construction phase, a mitigation audit will occur annually to document the effectiveness of proposed mitigations. The audit outcomes will inform revisions to the WMMP and

help determine whether new mitigation measures need to be implemented.

3.4a In response to the question of how the GNWT plans to directly involve the DRRC, Délı̨nę Got'ı̨nę Government and Sahtúot'ı̨nę harvesters, please refer to the GNWT's response to DRRC IR #01, Part 1.5b information request for further details.

3.5 The conservation-based threshold related to disturbed caribou habitat (i.e., maximum 35% total disturbance within the NT1 Boreal Caribou Range) provides a guideline to ensure a self-sustaining location population, i.e., remain stable or increase in size (ECCC, 2020). If the NT1 boreal caribou population remains stable or grows, it would enable the continuation of the Sahtu Needs Level as outlined in the Sahtú Dene Metis Comprehensive Land Claim Agreement. Needs can be met if habitat can provide for a self-sustaining population, among other management considerations such as managing mortality rates. The NT1 Boreal Caribou Range is within the conservation-based threshold. This calculation is developed using all available data as of 2024, including wildfires documented up until and during 2023 and human disturbances *circa* 2020. For detailed calculations, refer to the GNWT's response to MVEIRB IR #52.

3.6 The conservation-based threshold is specific to boreal caribou. The Caribou Plan refers to ʔekwę́ or barren-ground caribou (Délı̨nę Renewable Resources Council, 2016), such as the Bluenose-East herd. However, the Caribou and Moose LAA does not overlap with the current annual range of Bluenose-East barren-ground caribou, so no specific thresholds were developed for this caribou ecotype.

3.7 Project-specific engagement in summarized in the DAR, Section 10.1.2.

3.8 The GNWT will engage on the further development of the WMMP with Indigenous Governments, Indigenous Organizations, and other affected parties (such as the Sahtú RCCs). This will include specifying roles and responsibilities of individual organizations in the implementation of the WMMP.

3.9 The GNWT is unable to provide a definitive answer to the implementation of future possible mitigation funding at this time. Implementation of proposed mitigations is contingent on several considerations, including:

- Mitigation discussions during the environmental assessment;
- Which mitigations are recommended by MVEIRB and ultimately accepted through the final Ministers' decision on the Report of Environmental Assessment (REA);
- A formal GNWT decision to advance the project to construction; and
- Receipt of funding to construct the Project. .

The GNWT has carried out engagement with Indigenous Governments, Indigenous Organizations, and other affected parties on the proposed mitigation measures, and is committed to ongoing engagement on the development of the WMMP.

3.10 The Caribou Plan is specific to ʔekwę́ or barren-ground caribou (Délı̨nę Renewable Resources Council, 2016). The Project does not overlap with the current annual range of Bluenose-East barren-ground caribou. Therefore, the WMMP primarily focuses on monitoring access and harvest of boreal caribou, though GNWT commits to ongoing monitoring of barren-ground caribou through existing programs. Collaborative adaptive management that integrates feedback and knowledge from stakeholdersis proposed. For further discussion, please review the GNWT's response to DRRC IR# 02, part 2.2–2.3b

References

Délı̨nę Renewable Resources Council. 2016. Belare Wíle Gots'ę ʔekwę – Caribou for All Time – A Délı̨nę Got'ı̨nę Plan of Action. 48 pp. (https://www.srrb.nt.ca/document-repository/1287-2016-009-deline-caribou-plan-approved-16-01-08-edition

Topic: DRRC04 - Adequately responding to changes to hunting and harvest pressure

Preamble from the Délı̨nę Renewable Resources Council:

The Mackenzie Valley Highway Project - Developer's Assessment Report states that "For harvesting and land use, the Project will provide all-season access to areas previously only accessible in winter. This is likely to facilitate hunting, fishing, plant gathering, and access to cultural resources. This may increase harvest pressure on certain species…" (Section 8.3). Further, the DAR states that "…increased access may lead to overfishing, which could lead to a significant effect if not managed properly" (Section 8.3). The Délı̨nę ʔehdzo Got'ı̨nę (also known as the Délı̨nę Renewable Resources Council, "DRRC") is concerned that all-season access could result in additional harvesting and changes in harvest patterns of caribou, moose, fish and other species, which may negatively impact wildlife populations and the availability of harvesting for Sahtúot'ı̨nę harvesters.

The DRRC has two primary concerns about potential change and subsequent management of harvest. First, we are concerned that the baseline understanding in the DAR of moose, caribou, and fish is incomplete and has not sufficiently considered Dene ts'ı̨lı̨, especially Sahtúot'ı̨nę knowledge. The DRRC also notes that information on caribou and moose abundance, density, and population dynamics is patchy and sporadic in the DAR (Section 10.2 and Appendix 10A), and that little information on these parameters is available at all for fish (Section 11.2.2.2 and Appendix 11A). This makes it difficult to understand and contextualize how any changes in hunting pressure and success may act on residual and cumulative effects for moose and caribou (i.e., Sections 10.4 and 10.5, respectively) and fish as well as other traditional land uses and harvesting (i.e., Section 11.4 and 11.5). In short, the DAR makes some predictions, but they are speculative and largely not evidenced based. Importantly, the full extent of the potential impacts of increased harvesting could not be adequately addressed in the DAR given the limited spatial scopes of evaluation. While the Délı̨nę District is largely outside of the Local and Regional Assessment Areas (LAA and RAA (for these Valued Components this area is the same), Sahtúot'ı̨nę use and harvest throughout the Sahtú; wildlife also move through and use the entire landscape, regardless of the LAA and RAA boundaries.

Our second concern is around how to respond to changes in hunting pressure that may cause changes in caribou, moose, or fish populations. The DRRC understands that hunting tags are used as a way to manage hunting allocation and pressure, but "community members also noted there is some concern among residents about increased numbers of non-residents accessing the area for recreational hunting, as it may lead to adverse effects on wildlife. Increased competition for wildlife could in turn reduce the availability of traditional foods for community consumption and increase reliance on store-bought foods to supplement diets" (Section 8.2.9). It is unclear to the DRRC how the GNWT intends to limit harvesting by people who are not Sahtú Dene Metis Comprehensive Land Claim Agreement (SDMCLCA 1993) beneficiaries once the road opens to reduce impacts of harvesting, and how the GNWT will respond if monitoring data shows unacceptable changes in wildlife populations or beneficiary harvesting.

Under s. 13.8.40 of the SDMCLCA, when the government conducts wildlife research or harvesting studies in the Sahtú, those studies must directly involve the DRRC and Sahtúot'ı̨nę harvesters to the greatest extent possible. The DAR does not explain how the GNWT intends to meet their obligations under the

SDMCLCA. Further, the Belare Wíle Gots'ę ʔekwę – Caribou for All Time – A Délı̨nę Got'ı̨nę Plan of Action" (the 'Caribou Plan') outlines a harvest monitoring strategy, but the DAR does not make reference to the Caribou Plan or this strategy. The Caribou Plan was first adopted by the Délı̨nę Got'ı̨nę Government (DGG) in 2016 and the GNWT approved the Caribou Plan in February 2017.

Request from the Délı̨nę Renewable Resources Council:

4.1 How does the GNWT plan to evaluate the relationship between changes in hunting pressure and success and subsequent changes in caribou, moose, and fish populations and population dynamics?

4.1.a. Specifically, (i) what data and information will the GNWT collect on hunting pressure and hunting success, (ii) how often will that information be collected and (iii) how will it be collected?

4.1.b. How will the GNWT use the harvest monitoring strategy outlined in the Caribou Plan to design and deliver harvest research?

4.1.c. How will the DRRC, Délı̨nę Got'ı̨nę Government (DGG), and Sahtúot'ı̨nę harvesters be directly included in the design and implementation of the harvest research?

4.1.d. How and when will harvest data be shared between GNWT and Indigenous organizations and governments?

4.1.e. What process does the GNWT intend to use to assess harvest pressure and assess associated impacts of harvest pressure on wildlife populations and harvesting by SDMCLCA beneficiaries?

4.1.f. How does the GNWT intend to make decisions on when changes in harvesting allotments of non-beneficiaries is required to respond to increased harvest pressure and associated decreased wildlife populations or decreased beneficiaries' harvesting?

4.1.f.i. Has the GNWT set thresholds for when changes in harvesting allotments will happen?

4.1.f.ii. What body of evidence and what level of certainty will be required to make changes to hunting allotments?

4.1.f.iii. How will the DRRC and DGG be included in that decision making process?

4.2 How will the GNWT ensure that its wildlife harvesting monitoring and enforcement plans follow the Caribou Plan, including as it may be changed over time, during the construction and operation and maintenance phases of the Project?

Response from the Government of the Northwest Territories:

Preamble:

GNWT acknowledges the concern raised by the Dél̨nę Renewable Resources Council (DRRC) in the preamble to their specific information requests, which states:

"*community members also noted there is some concern among residents about increased numbers of non-residents accessing the area for recreational hunting, as it may lead to adverse effects on wildlife*."

Before responding to the specific information requests below, GNWT would like to clarify how terms such as "Resident" and "Non-Resident" are defined or set out with respect to licence requirements under the hunting and trapping regulations under the *Wildlife Act* (GNWT 2024):

1. General Hunting Licence: An Aboriginal person that is a member or eligible to be a member of an NWT organization listed in the regulations is required to have a General Hunting licence to harvest in areas of the NWT in which they do **not** have an Aboriginal or Treaty right to harvest.
2. NWT Resident: A Canadian citizen or landed immigrant who has been living in the NWT for 12 continuous months.
3. Non-resident: A Canadian citizen or landed immigrant who lives outside the NWT or has not resided in the NWT for 12 months.
4. Non-resident Alien: An individual who is neither an NWT resident nor a non-resident.
5. Aboriginal harvesters who do not have traditional harvesting rights in the NWT need a Resident or Non-resident Hunting Licence.

Aboriginal harvesters that are harvesting where they have Aboriginal or Treaty rights (such as Participants under the Sahtú Dene Metis Comprehensive Land Claim Agreement (SDMCLCA) harvesting within the Sahtú Settlement Area) do not require a licence.

GNWT interprets DRRC's concern with respect to "non-residents" to more broadly include both "NWT Residents" that reside outside of the Sahtú Settlement Area as well as "Non-residents", "Non-resident Aliens", and "General Hunting Licence" holders that may reside outside of the Sahtú Settlement Area.

GNWT also notes that within the Sahtú Settlement Area, anyone without an Aboriginal or Treaty right to harvest must ask for and receive permission to hunt on Sahtú Settlement Lands (private lands).

With respect to the DRRC's statement that the DAR does not make reference to the "Belare Wíle Gots'ę ʔekwę́ – Caribou for All Time – A Dél̨nę Got'ı̨nę Plan of Action" (the 'Caribou Plan'), GNWT notes that Dél̨nę's caribou plan is referenced in Volume2, Section 10.2.2.2 (page 10-27) of the Developer's Assessment Report (DAR).

4.1 How does the GNWT plan to evaluate the relationship between changes in hunting pressure and success and subsequent changes in caribou, moose, and fish populations and population dynamics?

GNWT will continue to implement the annual voluntary NWT Resident Hunter Harvest Survey program to help assess levels of NWT Resident hunting pressure and success in the NWT. For clarity, 'Resident' in this case refers to an NWT Resident as defined under the *Wildlife Act* and described in the preamble, not whether that person resides in the Sahtú Settlement Area. Each fall, the NWT Resident Hunter Harvest Survey is sent to all NWT Resident hunters who purchased a resident big or small game hunting licence during the hunting season. Results from the previous year are sent along with the survey. While this program provides information on broad-scale (regional) trends in hunting pressure and success, additional programs or modification of the existing NWT Resident Hunter Harvest Survey may be considered to specifically monitor NWT Resident hunting pressure along the MVH.

Under the proposed Wildlife Management and Monitoring Plan (WMMP) for the MVH project, GNWT would support Indigenous governments and Indigenous organizations (IGIOs) in establishing voluntary Indigenous harvest monitoring and reporting programs to assess levels of hunting pressure and success of SDMCLCA participants along the MVH alignment.

GNWT would continue its annual collar-based monitoring programs for boreal caribou to assess changes in population trend along the MVH (described in DAR Volume 2, Appendix 10A, and Volume 5 - WMMP – Section 5.2.2). Existing GNWT-led monitoring programs to assess population size and trend of barren-ground caribou herds would also continue (described in DAR Volume 2, Appendix 10A and Volume 5 - WMMP – Section 5.2.4), as would periodic aerial moose surveys to monitor changes in abundance (described in DAR Volume 5 - WMMP – Section 5.2.3).

GNWT will use information from these monitoring programs to periodically evaluate whether the observed population trends for caribou and moose suggest a population decline. If a decline is observed, GNWT would evaluate whether harvest monitoring data suggests a link to the declines and would initiate discussions with IGIOs.

As stated in Section 17.9 of the DAR, the GNWT will work with the Sahtú Renewable Resources Board (SRRB) and other resource managers such as DFO to address uncertainty regarding the potential effects of increased access created by the Project on the sustainability of large-bodied fish populations in the assessment areas. This would include monitoring of harvest that can be used to identify the need for management actions to be taken by the appropriate resource management organization. The need for such a program will be evaluated in cooperation with regulators and resource management agencies including Department of Fisheries and Oceans (DFO) and agencies such as the SRRB. Additional monitoring requirements, if needed as part of the Project's approval and permitting, will be incorporated into a project-specific fish and fish habitat monitoring plan.

4.1.a. Specifically, (i) what data and information will the GNWT collect on hunting pressure and hunting success, (ii) how often will that information be collected and (iii) how will it be collected?

GNWT conducts an annual voluntary NWT Resident Hunter Harvest Survey. The annual survey mailout includes summary graphs that provide estimates of annual NWT Resident harvest levels for each big

game species for the years prior to the survey mailout. The data is summarized into 3 broad regions reflecting where NWT Resident Hunters that are issued tags are from. The 3 regions are: 1) Inuvik: all communities in the Inuvialuit Settlement Region, Gwich'in Settlement Area and Sahtú Settlement Area; 2) Fort Smith: all communities in the Dehcho region, South Slave region and North Slave region, including Tłı̨chǫ Lands, except Yellowknife; and 3) Yellowknife. The survey provides estimates based on the region where hunters reside, not where hunters harvested wildlife or where they intended to hunt. It can be used to assess broad-scale trends in hunting pressure and success but may not provide sufficiently detailed enough information to assess hunting pressure and success in specific areas such as along the MVH corridor.

As described in DAR Volume 5 - WMMP – Section 5.2.8, GNWT will create an additional Renewable Resource Officer (RRO) position in one of the communities along the MVH to conduct harvest monitoring and enforcement patrols and will work with relevant wildlife co-management organizations and IGIOs, including Renewable Resource Councils (RRCs), to establish a voluntary Indigenous harvest monitoring and reporting program for the MVH corridor.

4.1.b. How will the GNWT use the harvest monitoring strategy outlined in the Caribou Plan to design and deliver harvest research?

GNWT will consider and reference Délı̨nę's Caribou Plan when engaging with Sahtú RRCs and the SRRB about the design of harvest monitoring programs specific to the WMMP for the MVH.

4.1.c. How will the DRRC, Délı̨nę Got'ı̨nę Government (DGG), and Sahtúot'ı̨nę harvesters be directly included in the design and implementation of the harvest research?

Typically, GNWT provides financial support to IGIOs to design and implement their own Indigenous harvest monitoring programs. For example, GNWT Environment and Climate Change (GNWT-ECC) provides support annually to the Gwich'in Renewable Resources Board and K'atl'odeeche First Nation to lead their own harvest monitoring programs, and under Measure 9-1 for the Tłı̨chǫ Highway, GNWT provides support to the Tłı̨chǫ Government to monitor Tłı̨chǫ harvest along that road. A similar approach for the MVH project would ensure that the DRRC, Délı̨nę Got'ı̨nęGovernment (DGG), and Sahtúot'ı̨nę harvesters are directly included in the design and implementation of the harvest monitoring with respect to Indigenous harvest.

4.1.d. How and when will harvest data be shared between GNWT and Indigenous organizations and governments?

NWT Resident Hunter Survey data was previously summarized in annual reports up to 1996/97 and a report on data collected between 1997-2009 was published in 2012 (GNWT-ECC Manuscript Report 218). These reports can be found by searching using the key words 'resident hunter survey' on the GNWT-ECC Resources webpage (https://www.gov.nt.ca/ecc/en/resources). Since 2012, annual summary graphs of the NWT Resident Hunter Survey data have been included as part of the annual NWT Resident Hunter Survey mailout. Summaries of the data can be requested by IGIOs, but the raw NWT Resident Hunter Survey data is subject to privacy constraints. GNWT publishes yearly reports on Mackenzie Mountain

Non-Resident and Non-Resident Alien Hunter Harvest data, also available on the GNWT-ECC Resources webpage.

Where GNWT provides support to IGIOs to lead their own harvest monitoring programs, summaries of the results are usually shared with GNWT, but may be kept confidential by the Indigenous Government or Indigenous Organization.

The annual status meeting for the Advisory Committee for Cooperation on Wildlife Management (ACCWM) provides an opportunity for IGIOs to share information on harvest and other indicators of herd health of the Cape Bathurst, Bluenose-West, and Bluenose-East barren-ground caribou herds. This information is summarized and made available in annual action plans published on the ACCWM resources web page (https://accwm.com/resources).

4.1.e. What process does the GNWT intend to use to assess harvest pressure and assess associated impacts of harvest pressure on wildlife populations and harvesting by SDMCLCA beneficiaries?

Please see GNWT's response to question 4.1. Results of harvest monitoring programs that are included as a component of the WMMP would be reported on in annual WMMP reports and/or periodic comprehensive WMMP reports following completion of construction of each phase of the road, and periodically once the road is operational.

As outlined in our response to 4.1.c, under the WMMP, GNWT would provide support to Sahtú IGIOs to collect information from SDMCLCA participants to monitor their harvesting activity along the MVH and to assess whether their harvesting practices/opportunities have been impacted by the MVH project.

4.1.f. How does the GNWT intend to make decisions on when changes in harvesting allotments of non-beneficiaries is required to respond to increased harvest pressure and associated decreased wildlife populations or decreased beneficiaries' harvesting?

Please see GNWT's response to question 4.1. GNWT would rely on the results of caribou and moose population monitoring programs and information provided by IGIOs (e.g., through the ACCWM annual status meetings described in 4.1.d) to assess whether there is evidence of declines in wildlife populations. If a declining trend was detected in a population, GNWT would initiate engagement with IGIOs including the SRRB and Sahtú RRCs in regards to harvest management and any potential changes that may be necessary.

4.1.f.i. Has the GNWT set thresholds for when changes in harvesting allotments will happen?

No thresholds have been pre-determined to trigger changes in harvesting allotments for boreal caribou or moose. As stated above, if a population trend was detected for either of these species that suggested a serious decline, GNWT would initiate engagement with IGIOs, including the SRRB and Sahtú RRCs, to assess and determine an appropriate management response.

The 'Taking Care of Caribou' plan developed by the ACCWM in 2014 defines approximate population thresholds for the Cape Bathurst, Bluenose-West and Bluenose-East barren-ground caribou herds to help guide management decisions and actions based on herd status. It includes several potential harvest management actions that could be recommended by ACCWM members depending on herd status. Each

ACCWM member may, if circumstances require, set a Total Allowable Harvest (TAH) for their region and then allocation is done within the region according to what is outlined in individual comprehensive land claim agreements. The ACCWM is made up of the Wildlife Management Advisory Council (NWT), Gwich'in Renewable Resources Board, ʔehdzo Got'ıę ę Gots'ę́ Nákedı (Sahtú Renewable, Resources Board), Wek'èezhìi Renewable Resources Board, Kitikmeot Regional Wildlife Board, and Tuktut Nogait National Park Management Board. The ACCWM can make recommendations to the GNWT Minister of Environment and Climate Change with respect to limits on harvest as established through land claim agreements, with non-commercial harvesting having priority over commercial harvesting.

4.1.f.ii. What body of evidence and what level of certainty will be required to make changes to hunting allotments?

GNWT would use the results of caribou and moose monitoring programs and information provided by IGIOs and communities to assess population status and possible population declines that might trigger discussions on management actions including harvest. Measures of uncertainty around population trend or size estimates (e.g. 95% confidence intervals) obtained from monitoring data would be considered when evaluating the strength of evidence for a population change.

4.1.f.iii. How will the DRRC and DGG be included in that decision making process?

GNWT would follow the processes set out in the SDMCLCA for making any proposed changes to harvest allocations or limits. The processes set out in the SDMCLCA ensure the DRRC and DGG would, at minimum, have the opportunity to provide written and oral submissions to the SRRB in any such decision-making process.

4.2 How will the GNWT ensure that its wildlife harvesting monitoring and enforcement plans follow the Caribou Plan, including as it may be changed over time, during the construction and operation and maintenance phases of the Project?

Other than in certain respects, the DRRC is responsible for implementing the "Belare Wíle Gots'ę́ ʔekwę́ – Caribou for All Time – A Délı̨nę Got'ı̨nę Plan of Action" (the 'Caribou Plan'), which applies to participants from Délı̨ne under the SDMCLCA.

The GNWT will review and consider the Caribou Plan when engaging with Sahtú IGIOs, RRCs and the SRRB about the design of harvest monitoring programs specific to the MVH WMMP, and ensure that the DRRC and DGG are involved in those discussions. The GNWT will strive to ensure that nothing in the MVH WMMP contradicts the Caribou Plan, and that the MVH WMMP harvest monitoring programs complement the programs led by the DRRC under the Caribou Plan.

References

GNWT. 2024. NWT Summary of Hunting & Trapping Regulations. 49 pgs. Available at: https://www.gov.nt.ca/ecc/sites/ecc/files/resources/2024_ecc_hunting_and_trapping_summary_en_web.pdf

Advisory Committee for Cooperation on Wildlife Management. 2014. Taking Care of Caribou: the Cape Bathurst, Bluenose-West, and Bluenose-East barren-ground caribou herds management plan. Yellowknife, NT. Available at: https://accwm.com/s/Taking_care_of_caribou.pdf