



September 27, 2024

JoAnne Deneron
Chairperson
Mackenzie Valley Environmental Impact Review Board
200 Scotia Centre
PO Box 938, 5102-50th Ave
Yellowknife, NT X1A 2N7

Government of Canada's Responses to Information Requests for the proposed Mackenzie Valley Highway Project (EA1213-02)

Dear Ms. Deneron,

To support the Mackenzie Valley Environmental Impact Review Board's (Review Board) environmental assessment of the Government of the Northwest Territories (GNWT) Department of Infrastructure's (INF) proposed Mackenzie Valley Highway (MVH) Project, the Government of Canada is pleased to provide responses to information requests (IR) submitted by the Review Board, Łíídlıı Kúę First Nation (LKFN), and Délıne Got'ıne Government (DGG).

In the first round of IRs, the following requests were addressed to the Government of Canada:

- Review Board IR #82 (Overfishing Pressures);
- Review Board IR #83 (Important Bird Habitat in the Dehcho);
- Review Board IR #84 (Caribou and Moose: Significance Definition);
- Review Board IR #85 (Caribou and Moose: Zone of Influence);
- Review Board IR #86 (Caribou and Moose: Conservation Allowances);
- Review Board IR #87 (Caribou and Moose: Species at Risk and vehicle collisions);
- Review Board IR # 88 (Nutrition North Subsidy);
- LKFN IR #12 (General Comment: Liard and Mackenzie Bridge Construction); and
- DGG IR #12 [Jackie Siegel IR #4] (Food Prices in Délıne).

Responses submitted through the Online Review System and attached reflect input received from Crown-Indigenous Relations and Northern Affairs Canada, Fisheries and Oceans Canada, Transport Canada, Housing, Infrastructure, and Communities Canada, and Environment and Climate Change Canada.

It is understood that there will continue to be opportunities to address concerns, and provide comments and recommendations on the proposed MVH Project as the environmental assessment continues. The Government of Canada appreciates the opportunity to respond to these IRs. If you have any questions related to this correspondence, please contact Shannon Allerston at shannon.allerston@cannor.gc.ca or 867-445-7230.





Sincerely,

Shannon Allerston
A/Senior Project Manager
Northern Projects Management Office
Canadian Northern Economic Development Agency

Attached: Government of Canada Information Request Responses

cc. Distribution List

Ron Pankratz
A/Regional Director General
Northwest Territories Region
Crown-Indigenous Relations and Northern Affairs Canada

Tom Hoggarth
A/Regional Director
Aquatic Ecosystems
Fisheries and Oceans Canada

Mary Taylor
Director General,
Environmental Protection Operations Directorate
Environment and Climate Change Canada

Chantal Roberge
National Director
Environmental Health Program
Health Canada

Rinaldo Jeanty
Director General
Environmental Protection Operations Directorate
Natural Resources Canada

Shari Currie
Director General
Prairie and Northern Region
Transport Canada





Government of Canada Information Request Responses

No.	Topic	Reviewer Preamble	Reviewer Request	Response
Déljñę Got'jñę Government – Jackie Siegel				
4 (12)	Food Prices in Déljñę	<p>The DAR states that there will be “greater variety of groceries (easier to access groceries in other communities as well ability for greater variety of fresh foods to be provided all-season)” due to the all-season operation of the highway (section 9.5.5). The DAR also outlines measurable parameters related to food security in section 9.2.4.1, including cost of food (\$) and access to lower cost (high quality) food. As a community in the RAA, Déljñę is not likely to experience this benefit.</p> <p>Contrary to some of the anticipated benefits for communities along the road route, DGG is concerned that landed prices in our community will be negatively affected. As Tulita and Norman Wells move to the road net, aerial freight delivery and passenger traffic levels will be significantly altered, with a potential negative economy of scale being imposed</p>	<ol style="list-style-type: none"> 1. What work has Canada done to understand the impacts to Déljñę’s food mail program, as a result of this project? 2. Given that Déljñę Got'ine Government expects food prices to rise in Déljñę, has Canada (Nutrition North) explored mitigations against this? How will Canada ensure food prices do not rise in Déljñę? What mitigations are Canada willing to provide to offset the impacts of its road? 	<p>In 2011, the Food Mail Program was replaced by the Nutrition North Canada (NNC) Program which encompasses a suite of food security initiatives, including the retail based NNC subsidy, the co-developed Harvesters Support Grant and Community Food Programs Fund. In 2022, the Food Security Research Grant was launched by NNC which has funded five ongoing Indigenous led research projects with the objective of increasing the evidence base to inform enhancements to the NNC retail subsidy model. These projects are now generating new knowledge on the impact of the NNC retail subsidy on food security among Indigenous Peoples in isolated communities, with a view to inform improvements to the subsidy to better support equitable access to store-bought food. One ongoing project led by Sambaa K'e First Nation seeks to better understand and improve upon barriers to receiving the NNC subsidy.</p> <p>Two additional projects on subsidy pass-through and retailer accountability measures are also being undertaken at this time. One project led by Dr. Fred Lazar from York University has the objectives of developing methodology for determining the pass-through of the subsidy to produce inferences on how much of the subsidy is passed on to consumers. Dr. Lazar will also work closely with the program’s third-party auditors to address gaps and provide recommendations on how to improve the program’s accountability and transparency measures. The second project led by Dr. Andrew Spring from Wilfrid Laurier</p>





		<p>on the communities that are reliant on the air-supply net (Déljñę, Fort Good Hope, and Colville Lake). As a result, Déljñę is concerned that some of the positive themes of the project for the connected communities will be net negatives for our community – primarily cost of living.</p>		<p>University seeks to answer what perfect pass-through of the subsidy would look like and how to design the program with this goal in mind. This project will look at supply chain management for northern communities, including Déljñę. Collectively, these studies will provide additional evidence-based insights into food security challenges and opportunities available. The results will be considered, once available, and will inform future programming changes from an NNC perspective.</p> <p>Lastly, in order to comprehensively assess the effectiveness of NNC, a Departmental internal evaluation has been launched and will focus on NNC’s expanded programming. The evaluation is using a partnering approach with Indigenous partners, communities, Elders, Knowledge Keepers and those who use NNC to evaluate the relevance, design, delivery, efficiency and effectiveness of NNC’s 5 program areas. Sahtu representatives are part this exercise, and their observations and recommendations will be included in recommendations stemming from the evaluation.</p>
<p>Łídljł Kúę First Nation (Ft Simpson) (LKFN) -Trieneke Gastmeier</p>				
12	<p>General Comment: Liard and Mackenzie Bridge Construction</p>	<p>As the largest village in the region, Fort Simpson plays a critical role for surrounding communities that will be connected by this road, if approved. This includes providing health and social services, groceries, among other necessities. Given the increase in transportation-related issues due to forest fires and climate change more broadly, Fort Simpson</p>	<p>LKFN requests that Canada require the construction of the Liard River Bridge and the Mackenzie River Bridge simultaneously to the MVH as a condition of approval of the Mackenzie Valley Highway Environmental Assessment, and guarantee that Federal funding will be made available to enable the project to be constructed as soon as possible.</p>	<p>Łídljł Kúę First Nation (LKFN) states that construction of the Mackenzie Valley Highway (MVH) would be incomplete without the incorporation of bridges over the Liard River and Mackenzie River. According to LKFN, bridges in these locations would create the permanent access to the proposed MVH needed to relieve potential issues for transporting people and goods given the unreliability of ferries and winter roads. LKFN notes that a bridge across the Liard River would be the key mitigation and accommodation measure expected to address potential impacts from the MVH Project. LKFN has asked the Government of Canada to require construction of bridges across the Liard and</p>





		<p>represents a critical dead end along this road. If individuals are evacuated to our community from surrounding areas, and our Liard ferry/winter road and/or flights are unable to operate, this could represent a serious issue. Through recent consultation and engagement with members of our Nation in relation to the Mackenzie Valley Highway Project, it has become clear that our members see the proposed project as incomplete without the incorporation of bridges over the Liard River and Mackenzie River to create permanent, year-round access to the Mackenzie Valley Highway. The need for a Liard Bridge and a Mackenzie Bridge is imperative, and the approval of this road will underscore this necessity. LKFN is aware that the GNWT-INF has provided funding support in the past for bridge infrastructure and expects the GNWT-INF to make commitments to the Liard and Mackenzie Bridges as well.</p>		<p>Mackenzie Rivers as a condition of approval of the MVH Project following Environmental Assessment (EA).</p> <p>The Government of Canada notes that civil infrastructure works within the Northwest Territories are the Government of the Northwest Territories' (GNWT) responsibility. The GNWT defines its own infrastructure priorities and applies for federal funding to support local projects in line with those priorities.</p> <p>The Government of Canada is committed to better understand the MVH Project's potential adverse effects on LKFN's Indigenous and Treaty rights. To this end, the Government of Canada encourages LKFN to fully participate in the Review Board's EA process. This process assists in examining the MVH Project's potential adverse effects in detail, and facilitates the Government of Canada's s. 35 duty to consult, and if necessary, accommodate.</p> <p>The Government of Canada understands that in response to requests from Fort Simpson in 2020/2021, the GNWT completed a Liard River Bridge Study. A Mackenzie River Study was also completed in 2022. These are feasibility/conceptual planning-level studies that provide information for future bridge crossing consideration. Recently, GNWT Minister of Infrastructure, Caroline Wawzonek noted that the GNWT is not considering the construction of bridges at ferry crossings at this time.[1]</p>
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[1] [Why are N.W.T. ferries having problems this summer? Part of it is bad timing, minister says | CBC News](#)





		<p>It should be further noted that our membership have clearly and unambiguously stated that a bridge over the Liard River is the key mitigation and accommodation measure we are interested in seeking for the potential impacts from the MVH Project on our Nation's ability to exercise our Treaty and Aboriginal rights. Our Nation shares the concerns of the numerous Indigenous Nations along the route of the MVH regarding the unreliability of ice roads and ferries to access our community. A bridge across the Liard River to Fort Simpson and across the Mackenzie River to make the MVH a year-round highway is a logical addition to the Project and will make the MVH much more useful. The commitment to constructing these bridges must be fulfilled without delaying the currently anticipated schedule for the Mackenzie Valley Highway project as currently proposed.</p>		
Mackenzie Valley Environmental Impact Review Board - Catherine Fairbairn				
82	Fish: Overfishing pressures (DAR	Some sections of the DAR predict that increased recreational fishing is not expected to be an	A. What are your estimations regarding the potential increase	A. DFO is not in a position to provide estimates regarding the potential increase in recreational fishing. It is the developer's





sections 17.6, 17.7)	<p>issue for fish populations (see below). However, other sections say it is potentially significant (p.17-41).</p> <p>The DAR states, "Recreational fishing likely occurs primarily in the Mackenzie River (Deh Cho) or larger systems along the project alignment, such as the Blackwater River. Most watercourses along the project alignment are too small to provide fishing opportunities" (p.17-19). The DAR adds that "potential increased fishing pressure on the Mackenzie River (Deh Cho) and lakes within the RAA is not anticipated to affect fish populations in these waterbodies." (p.17-28). Mitigations are mentioned on p.17-22.</p> <p>The DAR also states, "In conclusion, a significant effect would only be for the change in fish population health if overfishing were to occur during construction and operations and maintenance of the Project" (p.17-41).</p>	<p>in recreational (non-Indigenous) fishing?</p> <p>B. Which waterbodies are most at risk of impacts from fishing?</p> <p>C. What design measures and management strategies are recommended to limit cumulative impacts on fish from overfishing in the long term?</p>	<p>responsibility to collect the data that will allow making those estimations.</p> <p>DFO suggest the developer determine whether there was an increase in recreational fishing along the Tłı̄chǝ and Inuvik to Tuktoyaktok Highways following construction. Additionally, to help estimate visitor projections, DFO recommends the developer conduct surveys in nearby communities/cities and among fishing groups to gauge interest in visiting and fishing in the newly accessible fishing areas. Finally, it would be beneficial to know if local tourism operators will be promoting the new road (e.g., for fishing the Mackenzie River or Great Bear Lake).</p> <p>B. Fishing may increase in waterbodies that are accessible and with known Arctic Grayling and Bull Trout populations. If these waterbodies support spawning grounds or overwintering areas, they would be vulnerable to overfishing and habitat disturbances.</p> <p>As per the DAR, Four Mile Creek, Twelve Mile Creek, Prohibition Creek, Great Bear River, Hodgson Creek, Ochre River, Whitesand Creek, Big and Small Strawberry Creeks, Vermillion Creek, Bob’s Canyon Creek, Dam Creek, and 30 other watercourses may fall within this category.</p> <p>The Mackenzie River supports diverse fish populations and serves as a migration route for several species; however, minimal impact is expected to the fishery along the route, based on scale, access and remoteness of the drainage.</p> <p>C. Design measures and management strategies used to limit cumulative impacts on fish from overfishing include:</p>
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		<p>Management strategies are mentioned as potential mitigation measures (p.17-42) but are not detailed in chapter 17. The Draft Fish and Fish Habitat Protection Plan (volume 5) does not consider overfishing as a potential effect in the mitigation measures tables (tables 2.1 to 2.6, p.7-15).</p>		<ul style="list-style-type: none"> • limiting accessibility: building approaches to crossings in a way to limit access to the water (e.g., steeper grades, no large road pullout or parking areas, maintaining vegetation buffer zones, installing barriers) • placing signage: displaying signage at both ends of the highway and at the high-risk crossings with information about fishing regulations and restrictions • communication and outreach: working with impacted communities to raise awareness on the importance of protecting sensitive fish and fish habitat; providing information on conservation measures and restrictions (e.g., posting pamphlets, social media, posters in the community hall) • developing a Fisheries Management Plan with impacted communities to: <ul style="list-style-type: none"> ○ identify areas of concerns ○ identify conservation objectives ○ establish conservation measures for the identified areas of concerns (e.g., only allow catch and release fishing practices, establish fishing quotas) ○ identify gaps in knowledge where further research/data collection is needed ○ monitor potential increases in recreational fishing (e.g., angler survey program) and the effectiveness of the conservation measures ○ use monitoring data to adapt the Fisheries Management Plan to conservation objectives
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				<p>○ communicate and educate fishers</p> <p>Please note that sport fishing in the Sahtu Settlement Area may be subject to terms and conditions in accordance with the Sahtu Dene and Metis Comprehensive Land Agreement and the Northwest Territories Fishing Regulations.</p>
83	<p>Culture, Traditional Land Use, and Harvesting: Important Bird Areas in the Dehcho (DAR section 11.2.3.5.2)</p>	<p>The Review Board acknowledges the developer’s response to LKFN IR#13 about nesting sites of peregrine falcons. However, according to the Developer’s Assessment Report, "The SLUP [Sahtu Land Use Plan] (2013) acknowledges three Important Bird Areas (IBAs) identified by the Canadian Wildlife Service within the Sahtu Region, which represent important breeding habitats for several migratory species (SLUPB, 2023)" (p.11-43).</p> <p>The Developer’s Assessment Report does not provide information regarding Important Bird Areas in the Dehcho region.</p> <p>The Review Board is looking for a response from the ECCC-CWS.</p>	<p>Please describe any Important Bird Areas or other habitat of importance for the Mackenzie Valley Highway identified by the Canadian Wildlife Service in the Dehcho region.</p>	<p>The Important Bird Areas (IBAs) identified by the Canadian Wildlife Service (CWS) within the Dehcho Region are:</p> <ul style="list-style-type: none"> - NT083: Mills Lake IBA; and - NT084: Beaver Lake IBA. <p><u>Mills Lake IBA (IBA Site Listing (ibacanada.com))</u>: 61.462° N 118.235° W</p> <p>Mills Lake is formed by a widening of the upper Mackenzie River and is found at a point where the Horn River joins the Mackenzie River. The marsh and sedge shallow-water zones of Mills Lake attract thousands of migrating waterfowl during fall migration in September and October. The northern and eastern shoreline, and delta areas are most favoured. Habitat(s) include rivers/streams, freshwater lake, freshwater marsh, and mud or sand flats (freshwater). Further information on this important site is also available in <u>“Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut”</u> (NT Site 18).</p> <p><u>Beaver Lake IBA (IBA Site Listing (ibacanada.com))</u>: 61.126° N 116.949° W</p> <p>Beaver Lake is the name for a wide part of the Mackenzie River where the river meets the western end of Great Slave Lake. Tundra Swans and several species of ducks use Beaver Lake as a stopover during both spring and fall migration. The most common species are Canvasback, American Wigeon, Mallards, and the scaup species. Habitat(s) include mixed woods (boreal/alpine), freshwater lake, and freshwater</p>





				<p>marsh. Further information on this important site is also available in "Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut" (NT Site 19).</p> <p>The Edézhzié National Wildlife Area, co-designated as a Dehcho Protected Area, borders the northern extent of Mills Lake IBA NT083 and extends northwest to Highway 1 at 123°4'47"W and 62°42'10"N. This protected area is home to many species, including important species at risk such as boreal caribou. There is no reference to this area in the Developers Assessment Report (DAR).</p> <p>What this means in regards to assessing effects of the proposed highway: The Dehcho IBAs and protected area are located near Highway 1 and Highway 3. These areas do not overlap with the proposed Mackenzie Valley Highway alignment itself but may be exposed to increased traffic on Highway 1 and Highway 3 during the construction and operation phases of the proposed alignment of the Mackenzie Valley Highway.</p> <p>References: IBA Canada. Important Bird and Biodiversity Areas in Canada. Accessed August 2024 from: ibacanada.com</p> <p>Latour, P.B., Leger, J., Hines, J.E., Mallory, M.L., Mulders, D.L., Gilchrist, H.G., Smith, P.A., Dickson, D.L. . 2008. Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut. 3rd ed. Canadian Wildlife Service Occasional Paper No. 114, Ottawa. (publications.gc.ca/pub?id=9.563039&sl=0)</p>
84	Caribou and Moose: Significance	The methodology used for assessing impacts and determining the significance of	In the opinion of ECCC, has the 2020 Amended Recovery Strategy document and its	ECCC's Boreal Caribou 2020 Amended Recovery Strategy (the Recovery Strategy) does not provide methodology for assessing impacts and determining significance. The





	<p>definition (DAR sections 10.1.6 and 10.4.1.1)</p>	<p>the project on boreal caribou habitat references the ECCC 2020 document below.</p> <p>References: ECCC 2020 Amended Recovery Strategy for the Woodland Caribou (<i>Rangifer tarandus caribou</i>). Boreal Population in Canada, Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada., Ottawa. X111 +143pp</p> <p>The Review Board is looking for a response from the ECCC-CWS.</p>	<p>methodology for assessing impacts and determining significance been correctly used and implemented in the Developer’s Assessment Report? Please describe how and why ECCC reached its conclusion.</p>	<p>Developer’s Assessment Report (DAR) provides its own definition in section 10.1.6 for determining significance.</p> <p>The Recovery Strategy provides guidance on threats to caribou, the impact of disturbance at the range level, the identification of critical habitat and biophysical attributes required by caribou to carry out life processes and the identification of activities likely to result in the destruction of critical habitat. Some aspects of the guidance in the Recovery Strategy have been effectively implemented by the developer, while others have not.</p> <p>Range Level Disturbance: Use of conservation-based threshold</p> <p>The Recovery Strategy identifies <i>at least</i> 65% undisturbed habitat in a range as the disturbance management threshold, which provides a measurable probability (60%) for a local population to be self-sustaining. This threshold is considered a minimum threshold because at 65% undisturbed habitat there remains a significant risk (40%) that a local population will not be self-sustaining. As the amount of disturbance in a range increases, the risk that a local population will not be self-sustaining also increases.</p> <p>The developer references the threshold as a distinct point but should recognize that it is a minimum threshold related to a measurable probability the population will not be self-sustaining. This is particularly important in the cumulative effects assessment, given the range is currently approaching the threshold (Note, different values are provided for the % disturbance throughout the document: e.g., 31% disturbed DAR Section 8.3.2 pp 8-14; 28% disturbed DAR Section</p>
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				<p>10.5.2.3.1.1 pp 10-96.) The most recent calculations from ECCC, based on 2020 land cover data (ECCC 2020b), is 30%.</p> <p>The developer calculates the disturbance threshold (65% undisturbed) at the scale of NT1 (Northwest Territories range). This is correct as it was determined for use at the scale of the range (ECCC 2020). In the DAR, the % disturbance threshold, and exceedance of it, is calculated and discussed within the Local Assessment Area (LAA); this is an incorrect usage of the disturbance threshold. The disturbance threshold results from modelling conducted at the range level at the national scale (Environment Canada 2011). Therefore, while the threshold is calculated correctly for the scale of the full range, it has been incorrectly calculated when applying it to the project assessment area; the disturbance threshold should be used within the context from which it was developed.</p> <p>Regional range plans developed by the Government of the Northwest Territories (GNWT) also include disturbance threshold targets for each region, which are a maximum disturbance of 30% for the Sahtu region and 40% for the Southern NT1 region. The % disturbance numbers provided in DAR Section 10.6.2.1 pp 10-106, and referenced to Table 10.18, do not match the numbers provided in Table 10.18. In the text, % disturbance in the Southern NT1 range planning region exceeds the disturbance threshold target of 40% (46.7%) (see GNWT 2019, A Framework for Boreal Caribou Range Planning), so the project further contributes to exceedance of this target. In Table 10.18, however, southern NT1 % disturbance is 39.25% before the project and 39.25% after the project. This exceeds the ECCC threshold of 35% disturbance, however the regional land use plan sets a</p>
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				<p>threshold target of 40% disturbance for this region (balanced with a lower threshold in the Sahtu region). The error in these numbers changes the interpretation of the effect of the project. ECCC cannot appropriately interpret project effects until the errors are clarified.</p> <p>The developer does not estimate the total % disturbance of the range or regional planning areas resulting from all reasonably foreseeable future projects. All existing projects and reasonably foreseeable future projects in NT1, Sahtu Region, and Southern NT1 region should be included in the cumulative effects assessment.</p> <p>Section 7.2.3 in the Recovery Strategy (ECCC 2020) states, “The cumulative effects assessment will ... Assess the impact of all disturbances (anthropogenic and natural) at the range-scale... [and] Account for planned disturbances...” and further states, “...that, for large continuous ranges, a different approach for assessing cumulative effects will be required than for smaller discrete ranges. Dividing the large areas into smaller management units will allow land managers to understand where the disturbance is occurring and avoid irreversible range retraction and a permanent break in range connectivity.” This would support looking at cumulative effects in both Sahtu and southern NT1, as the proposed project overlaps with both, and these are the management areas that GNWT has already defined.</p> <p>Critical Habitat and Biophysical Attributes: Assessment of direct and indirect habitat loss</p> <p>To assess direct habitat loss, the developer calculated habitat that boreal caribou select, according to a Resource Selection</p>
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				<p>Function (RSF) model, which will be directly disturbed in the Project Disturbance Area (PDA). Caribou are a landscape scale species that require continuous tracts of undisturbed habitat. They occur in low densities throughout their distribution to reduce the risk of predation (Section 3.3.1 ECCC 2020). Connectivity within and between ranges is essential for boreal caribou persistence on the landscape (Section 3.3.2 ECCC 2020).</p> <p>While caribou may select (i.e., use more than available) specific types of habitats (represented in the DAR by landcover data), at the scale of the Project Development Area (PDA), all areas directly disturbed should be considered habitat loss, not only those land cover types selected in the RFA model as used more than available. The relative amounts of the selected/avoided habitat within the PDA area are informative (e.g., risks of impacts are higher if the habitat disturbed is all preferred). However, caribou may move through any of the habitat types present within their range, and thus, the loss of those areas, particularly as small patches interspersed with selected habitat types, can be expected to impact caribou.</p> <p>To assess indirect habitat loss, the developer applied a 500 m buffer to the PDA and calculated the full area of habitat types that boreal caribou select, according to an RSF model. The 500 m buffer is not appropriate for assessing project-specific impacts on boreal caribou. The 500 m buffer is based on model results specific to a range-level analysis of disturbance impacts on boreal caribou at the national scale (Environment Canada, 2020). Instead, for the reasons described above, the calculation would be more appropriate if it was to be applied</p>
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				<p>to all areas within the zone expected to experience direct disturbance by the proposed development.</p> <p>Critical habitat (CH) is not assessed or discussed in the DAR. The requirements under the Species at Risk Act (SARA) regarding critical habitat are identified in the Wildlife Management and Monitoring Plan (WMMP), but no direct assessment or discussion of critical habitat is provided. “Critical habitat is the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species’ critical habitat in the Recovery Strategy or in an action plan for the species” (Section 7, pp34, ECCC 2020). The <i>Species at Risk Act</i> requires that critical habitat be protected. Based on the current amount of disturbance in NT1 (i.e., currently above the 65% undisturbed habitat threshold), and the fact that there is not a range plan for all parts of the range, critical habitat is all undisturbed habitat in the NT1 range. Assessing impacts and determining significance for the species should include explicit consideration of impacts to critical habitat and how to mitigate those impacts.</p> <p>References: ECCC 2020a. 2020 Amended Recovery Strategy for the Woodland Caribou (<i>Rangifer tarandus caribou</i>). Boreal Population in Canada, Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada., Ottawa. X111 +143pp ECCC 2020b. 2020 - Anthropogenic disturbance footprint within boreal caribou ranges across Canada - As interpreted from 2020 Landsat satellite imagery. Environment and Climate Change Canada. Accessed September 2024 from:</p>
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				<p>2020 - Anthropogenic disturbance footprint within boreal caribou ranges across Canada - As interpreted from 2020 Landsat satellite imagery - Open Government Portal</p> <p>GNWT 2019. A Framework for Boreal Caribou Range Planning Summary. Government of the Northwest Territories. August 2019. Accessed September 2024 from: summary_a_framework_for_boreal_caribou_range_planning_august_2019.pdf (cclmportal.ca)</p>
85	<p>Caribou and Moose: Zone of influence (DAR sections 10.1.6, 10.4.1.1)</p>	<p>The GNWT response to LKFN#10 clarifies that the buffer used for the zone of influence (anthropogenic disturbance + 500 m buffer) is based on the Environment Canada 2011 study below. The GNWT response also states that this approach is accepted by ECCC for management planning.</p> <p>Reference: Environment Canada. 2011. Scientific Assessment to Inform the Identification of Critical Habitat for Woodland Caribou (Rangifer tarandus caribou), Boreal Population, in Canada. 2011 Update. Canadian Wildlife Service, Ottawa, Ontario. 102 pp. (http://epe.lac-bac.gc.ca/100/200/301/environment_can/2011/scientific_assessment_inform-ef/CW66-296-2011-eng.pdf) The Review Board is</p>	<p>Would ECCC confirm whether the 500 m buffer approach described in the Environment Canada 2011 document is for management planning only or for individual project assessment? Is the Environment Canada 2011 document appropriate for assessing project-specific impacts on boreal caribou for the Mackenzie Valley Highway? Please explain why or why not.</p>	<p>The 500 m buffer is based on model results specific to a range-level analysis of disturbance impacts on boreal caribou at the national scale. It is not appropriate to use this buffer size in a different analytical context, i.e., for assigning a zone of influence for determining indirect habitat loss from a specific development on caribou habitat. The assessment of indirect habitat loss, specifically, requires a different approach.</p> <p>For assessment of indirect effects, the zone of influence (ZOI) for this proposed development should be used and should be based either off of strong evidence in existing literature or analyses conducted to assess the project.</p> <p>In section 10.4.2.3.1.3 of the DAR pp 10-51, the developer includes a literature summary of the expected zone of influence for the project that could be used to inform their analysis. Comparable disturbance metrics are provided in section 10.5.2.3.1 under cumulative effects.</p> <p>Following their literature review, the developer states (DAR pp 10-52): “Regardless of the variability in the ZOI studies discussed in Section 10.4.2.1, Environment Canada (EC 2011) found that a 500 m buffer applied to anthropogenic</p>





		looking for a response from the ECCC-CWS.		<p>disturbances on boreal caribou best represented the combined effects of increased predation and avoidance on caribou population trends. In the interest of providing comparable disturbance metrics and measures to that used by the federal government and comparable assessments, a 500 m buffer was applied to the Project’s PDA to measure indirect habitat disturbance on caribou.”</p> <p>References Environment Canada. 2011. Scientific Assessment to Inform the Identification of Critical Habitat for Woodland Caribou (Rangifer tarandus caribou), Boreal Population, in Canada.2011 Update. Canadian Wildlife Service, Ottawa, Ontario. 102 pp. (http://epe.lac-bac.gc.ca/100/200/301/environment_can/2011/scientific_assessment_inform-ef/CW66-296-2011-eng.pdf)</p> <p>ECCC 2020 Amended Recovery Strategy for the Woodland Caribou (Rangifer tarandus caribou). Boreal Population in Canada, Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada., Ottawa. X111 +143pp.</p>
86	Caribou and Moose: Conservation allowances (ECCC #21 to GNWT Feb 28- April 22 ORS review)	The developer provided a response to an ECCC question about the Operational Framework for Use of Conservation Allowances. The Review Board, the developer and parties could benefit from examples of when and how conservation allowances were recommended in other jurisdictions in Canada, their	Provide examples of conservation allowances that were recommended by ECCC to mitigate or offset impacts to caribou in project assessment. Describe how these conservation allowances were implemented and any follow-up on the effectiveness or challenges in meeting	<p><u>Context: Offsetting Guiding principles</u></p> <p>Biodiversity offsets have long been used in Canada and internationally to achieve conservation objectives for wetlands, biodiversity, endangered species, and other valued ecosystem components. ECCC’s current approach for biodiversity offsetting is found in its <u>Operational Framework for Use of Conservation Allowances</u> (hereafter the Framework) published in 2012. Biodiversity offsets are an integral part of the mitigation hierarchy, a widely accepted concept that began to be formally recognized and codified in</p>





		<p>implementation, and whether objectives were achieved.</p> <p>Reference: 2012 Environment Canada Operational Framework for Use of Conservation Allowances</p> <p>The Review Board is looking for a response from the ECCC-CWS.</p>	<p>conservation allowance objectives.</p>	<p>the 1990s and that promotes project development designs with the least environmental effect. In that context, biodiversity offsets achieve measurable and demonstrable conservation outcomes resulting from actions designed to balance against the residual adverse effects of project developments after the implementation of avoidance, minimization and on-site restoration measures. Design elements found in section 6 of the Framework are based on international best practices and should be used as a starting point in the development of the offset plan.</p> <p>The offsetting should use scientifically defensible methods and techniques and include a rationale to explain the methods and techniques chosen. The project developer is responsible for preparing the offsetting plan. The implementation of the offset plan can be undertaken by a developer, a third party or the province/territory where the project is located, as long as expected outcomes are achieved.</p> <p>A combination of measures may be necessary in order to achieve equivalency between project effects and benefits to biodiversity. Below is the preferred sequence for offset types and some examples:</p> <p>Habitat “like for like”</p> <p>In order of priority, habitat restoration is preferred over enhancement and enhancement over creation and creation over securement.</p>
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				<p>resource planning, and habitat restoration and management, in conjunction with predator and alternate prey management where local population conditions warrant such action.</p> <p>Restoration effort is a key component of recovery planning for boreal caribou to achieve self-sustaining status. However, assessing the effectiveness of restoration activities is an ongoing process due to the time frames (excess of 50 to 100 years) needed to return the habitat to a state where boreal caribou can effectively use the habitat to carry out life processes. Undertaking actions to reclaim boreal caribou habitat through restoration efforts is usually the preferred approach that a developer can take to offset a project’s residual adverse effects on caribou habitat.</p> <p>Examples</p> <p>ECCC has recommended offsets for the loss of caribou habitat in many project assessment processes across Canada.</p> <p>The following examples result from extensive discussions and collaboration with developers, Indigenous groups, provincial authorities, and implicated decision-makers. A key lesson learned from these experiences with offsetting is that these discussions should occur as early as possible in the assessment process as there are many challenges to address. These challenges include determining risks to the Valued Component (VC), whether the effects can be offset, how much of an offset is required to achieve equivalency, finding key areas and offsetting options that can better benefit the VC and ensure long-term protection. The following outcomes represent working through the mitigation hierarchy, prioritizing avoidance of disturbance over minimizing adverse</p>
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				<p>impact, followed by on-site restoration, and lastly, offsetting. The implementation of these offset examples is a requirement of the project's enforceable conditions and will need to be reported on by the developer to the responsible authorities. At this time, it is not possible to comment on the effectiveness of these project offsets, however, it is expected that follow-up requirements and adaptive management will help ensure these offset measures achieve the expected outcomes.</p> <p>NOVA Gas Project, AB</p> <p>The NOVA Gas Transmission Ltd. 2021 pipeline expansion crosses the Little Smoky boreal caribou range in Alberta. The project represented a loss of 116 ha of critical habitat. Given the risks for boreal caribou and the residual adverse effects on First Nation (FN) rights, the Governor in Council imposed a condition on the developer, to implement a habitat offset equivalent to a ratio of 30:1 (offset : impact). This represented an amount of on-the-ground offsetting of 3480 ha or equivalent financial contributions to habitat restoration programs managed by the Government of Alberta within the Little Smoky caribou range. Consultation with the Province of Alberta was required since the majority of eligible restoration sites are located on Provincial Crown land. Conditions include monitoring and reporting mechanisms.</p> <p>Blackwater Gold Project, BC</p> <p>The Blackwater Gold mine in British Columbia was approved in 2019 and is located in the Tweedsmuir Southern Mountain Caribou local population unit. The project was estimated to</p>
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				<p>destroy 248 ha of high-elevation critical habitat and 4468 ha of Type 1 Matrix critical habitat.</p> <p>Project conditions required the developer to create an offsetting plan for caribou to the satisfaction of Environment and Climate Change Canada. The draft BC habitat offset decision support tool (DST) was used to inform the offsetting outcome with ratios ranging from 6.2:1 to 9.8:1. Collaborative efforts between ECCC, British Columbia First Nations and the developer established the offsetting measures would be comprised mainly of habitat restoration and will include habitat protection and securement.</p> <p>The total number of hectares to be restored based on this plan came to 27, 077 ha, with a focus on industrial road sites. Another 11,059 ha of key critical habitat under threat has been secured for 50 years (surface and sub-surface).</p> <p>The implementation of the restoration will be led by First Nations as part of a broader restoration program in the herd range and funded by the project developer. Conditions include monitoring and reporting mechanisms.</p> <p>North Corridor Expansion, AB</p> <p>The pipeline crosses 14.8 km of the Red Earth boreal caribou range and disturbs 20.09 ha of critical habitat, in Alberta. Additionally, the 10.85 ha compressor station expansion would disturb 6.1 ha of critical habitat in the Chinchaga range. Given the risks for boreal caribou (both ranges are not considered to be self-sustaining), and the residual adverse effects to First Nation rights, the Governor In Council imposed a condition to the developer, to implement a habitat offset</p>
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				<p>equivalent to a ratio of 30:1 (offset : impact). This represents an on-the-ground measure of restoring 183 ha of disturbed habitat within the Chinchaga range and 603 hectares within Red Earth range, to an undisturbed condition. In total, the developer is required to restore 786 ha of caribou habitat offsite. These conditions require the developer to work with the province of Alberta to determine suitable offset locations outside of the project area. Conditions include monitoring and reporting mechanisms.</p> <p>Environment and Climate Change Canada provides guidance related to administering the federal <i>Species at Risk Act</i> (SARA) in regards to federally listed Species at Risk (SAR) and expertise related to boreal caribou. The developer may consider the guidance and expertise provided by ECCC when developing and implementing offsets and mitigations for project impacts to SAR and boreal caribou. The regulator in each case is responsible for performing any follow-up activities to determine if those offsets and mitigations proposed by the developer are effective in meeting objectives.</p> <p>References: Environment and Climate Change Canada. 2012. Operational Framework for Use of Conservation Allowances. Government of Canada Publications, Ottawa. https://publications.gc.ca.</p>
87	Caribou and moose: Species at risk and vehicle collisions (DAR sections 10.4.4,	Section 10.4.4 assesses the risk of direct mortality to boreal caribou and moose from vehicle collisions during the construction and operation of the Mackenzie	Which species at risk are the most vulnerable to mortality from vehicle collisions?	ECCC is not an expert in vehicle collision mortality, particularly in the case of species at risk for which ECCC is not the day-to-day management authority.





	<p>19.4.4, ECCC letter to Review Board April 30, 2024)</p>	<p>Valley Highway. Boreal caribou are a species at risk.</p> <p>The ECCC letter to the Board dated April 30, 2024 (PR#204), describes the complete list of species at risk that may potentially be affected by the project. The Review Board has special responsibilities under the Species at Risk Act to protect species at risk.</p> <p>The Review Board is looking for a response from the ECCC-CWS.</p>	<p>The 2020 Revised Recovery Strategy for Boreal Caribou notes that “In some areas, boreal caribou are vulnerable to mortality from vehicle or rail collisions (Brown and Hobson, 1998); however, on a national scale, vehicle collisions are not thought to pose a major threat to boreal caribou (Boreal Caribou ATK Reports, 2010-2011).” ECCC-CWS is not the day-to-day management authority for this species and does not have territorial specific information.</p> <p>Regarding migratory bird species at risk, many of which the department is responsible for day-to-day management, tracking vehicle collisions is challenging due to the lack of data. The primary factor contributing to this is the small physical size of many birds. This contributes to most bird-vehicle collisions going unreported. Difficulty detecting dead birds along roadsides and high scavenger rates make research in this area difficult. In the absence of information on these incidents, it remains a gap in understanding and ability to assess and mitigate impacts to these species from collisions with vehicles.</p> <p>Birds that fly and swoop low to catch prey, especially common nighthawks and short eared owls, are most vulnerable to collisions with vehicles. Gunson & Schueler (2019) report vehicle mortalities of common nighthawk (<i>Chordeiles minor</i>), barn swallow (<i>Hirundo rustica</i>), bank swallow (<i>Riparia riparia</i>), and short-eared owl (<i>Asio flammeus</i>) in Ontario. Note that Government of NWT is the day-to-day management authority for short-eared owls and may have additional information on this species.</p> <p>ECCC (2021) further specifies that low-flying and swooping owls are at higher risk for vehicle collisions near roads. The</p>
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				<p>short-eared owl (<i>Asio flammeus</i>) is vulnerable because it tends to swoop low to hunt small mammals. The common nighthawk (<i>Chordeiles minor</i>) is additionally vulnerable because it tends to forage for insects, which are attracted to the warmth of road surfaces. Further, both species may hunt at night when visibility is poorer.</p> <p>References: ECCC 2020 Amended Recovery Strategy for the Woodland Caribou (<i>Rangifer tarandus caribou</i>). Boreal Population in Canada, Species at Risk Act Recovery Strategy Series. Environment and Climate Change Canada., Ottawa. X111 +143pp</p> <p>ECCC. 2021. Recovery strategy for the Barn Owl (<i>Tyto alba</i>) Eastern Population in Canada Species at Risk Act Recovery Strategy Series. ECCC, Ottawa.</p> <p>Gunson KE and Schueler FW. 2019. Wildlife on roads: A handbook. Eco-Kare International, Peterborough, Ontario.</p>
88	Nutrition North Subsidy	<p>Tulita and Norman Wells are currently eligible for the Nutrition North Canada (NNC) subsidy and the Harvesters Support Grant. Wrigley and Fort Simpson are eligible for the NNC subsidy only during seasonal periods of isolation (spring and fall) and are not eligible for the Harvesters' Support Grant.</p> <p>In the Developer's Assessment Report (DAR), the GNWT stated</p>	<p>1. How would the road change Tulita and Norman Wells' eligibility for the NNC subsidy, the Harvester's Support Grant and any other related funds?</p>	<p>Should the Mackenzie Valley Highway project be completed, Tulita and Norman Wells would no longer be eligible for the Nutrition North Canada (NNC) subsidy or the Harvesters Support Grant and Community Food Programs Fund. To support a smooth transition, NNC's procedure has been to continue providing the subsidy for a transitional period no greater than one year after the road is operational. This was done in Wha Ti, for example, to assist the community while it established logistical networks to transition to surface transportation. If under any circumstance the road was to close due to emergencies, temporarily isolated communities may also be eligible to receive the subsidy during this period</p>





		<p>that “the presence of an all-season road would likely eliminate the Nutrition North subsidy” (p.9-91). The GNWT added that “In Wrigley, the majority of households report being worried and being worried ‘often’ [about having enough money for food], which is a higher rate than is seen at the regional or territorial level. The rates in Tulita are lower than Wrigley and the regional rates, but still higher than the territory” (p.9-91).</p> <p>The DAR adds that “Wrigley shows comparable food price indices to the communities in the Sahtu Region that only have winter road access, even though it is connected to Hwy 1. It is unclear to what extent any difference in community food prices is due to communities being connected to an all-season road.” (p.9-92). The DAR also voices that “Given all of this information, it is not anticipated that the food price indices for the LAA communities will show a clear decrease as a result of the Project, which in turn would not</p>		<p>exclusively. This was the case when Dempster Highway closed two years ago due to flooding.</p> <p>In addition to the subsidy, the Harvesters Support Grant (HSG) and Community Food Program’s Fund (CFPF) have also been designed to support isolated communities. Once an all-season road becomes operational, connected communities no longer qualify for HSG/CFPF funding.</p>
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		<p>lead to an associated increase in food security” (p.9-92).</p> <p>This analysis brings concerns that the number of households that worry about having enough money for food may increase if the subsidy disappears, as the access provided by the all-season road does not guarantee lower food costs.</p> <p>In their answer to Review Board’s comment #7, the GNWT noted that “due to the way the Nutrition North program works, removal of communities from access to the subsidy upon being connected to an all-season road is suboptimal for NWT communities. The GNWT suggests that discussions between Health Canada (and other appropriate Government of Canada departments), GNWT and Indigenous Governments take place on issues related to the Nutrition North program and broader issues of responsibility to food security and socio-economic issues as part of the environmental assessment process.”</p>		
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		The Review Board is looking for a response from the Nutrition North Program.		
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