TECHNICAL MEMORANDUM

TO:

Impact Assessment Agency of Canada
Ontario Ministry of Environment, Conservation and Parks

FROM	EMAIL	REF
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DATE

08 April 2026

SUBJECT

Webequie Supply Road Project – Addendum to the Final Environmental Assessment Report / Impact Statement Responses to Comments on the Assessment of Effects on Wildlife and Wildlife Habitat

The attached report is Addendum #5 to the Final Environmental Assessment Report / Impact Statement (EAR/IS) for the Webequie Supply Road Project (the Project, WSR). The purpose of the Addendum is to provide supplemental information in response to comments on Section 12: Assessment of Effects on Wildlife and Wildlife Habitat of the Webequie Supply Road (WSR) Environmental Assessment Report/Impact Statement (EAR/IS). More specifically, the addendum was prepared to address comments 194, 201, 211, 212, 236, 238, 239, 241, 249, 250, 251, and 252 from the Ontario Ministry of Natural Resources (MNR). Details of these comments are presented in Appendix P2.M of the Record of Engagement and Consultation for the Project.

Webequie Supply Road
Environmental Assessment
Report / Impact Statement

April 8, 2026

AtkinsRéalis Ref: 661910

ADDENDUM 5: Wildlife and Wildlife Habitat

AtkinsRéalis

WSR WEBEQUIE SUPPLY ROAD

WEBEQUIE FIRST NATION

Preface

The purpose of this report (Addendum #5) is to provide supplemental responses to address outstanding comments and items of concern received from the review of the Draft Environmental Assessment Report / Impact Statement (EAR/IS) from:

- Ministry of Natural Resources (MNR): Comments 194, 201, 211, 212, 236, 238, 239, 241, 249, 250, 251, and 252.

Details of these comments are presented in Appendix P2.M of the Record of Engagement and Consultation that supports the Final EAR/IS.

This Addendum #5 includes the following:

1) Summary of outstanding issues related to the moose assessment, clarity on how post-construction population-level moose monitoring (beyond habitat-based indicators) will be implemented, identified gaps in Wildlife and Wildlife Habitat assessment (comment MNR-211).
2) Clarity on mitigations for predator access and increased hunting effects to moose, along with justification for effects of the project on moose (comment MNR-236).
3) Information on moose aquatic feeding areas, including the identification and description of aquatic feeding habitats within the Moose LSA (comment MNR-238).
4) Relevant references pertaining to black bear predation on moose calves in northern Ontario, as well as alternative sources demonstrating instances of moose using roads as refuges from predators (comment MNR-239).
5) Information on potential effects on moose arising from increased predator pressure and expanded access routes, and clarity on Tables 12-64 and 12-65 (comment MNR-241, MNR-249, MNR-250, and MNR-251).
6) Clarity on the scoring system used for assessing effects (comment MNR-252).
7) Information on potential effects of dust deposition on air quality and wildlife, including mitigation measures to minimize effects and how effectiveness may evolve over time (comment MNR-194).
8) Clarity on mitigation measure #11 and its effectiveness (comment MNR-201).

The general format of the Addendum #5 Technical Report is a description of the reviewers' comment followed by the Project Team's response.

Contents

1 Introduction

This Technical Memorandum serves as an addendum to the Webequie Supply Road Project ("WSR, the Project") Environmental Assessment Report/Impact Statement (EAR/IS) to inform the Crown's assessment of potential impacts on moose and other non-species at risk (SAR) wildlife.

This Addendum has been prepared to provide additional context, clarification, and supporting information regarding the assessment of potential effects on moose associated with both Project-specific activities and cumulative effects. It aims to strengthen the understanding of how Project components may interact with existing environmental conditions.

The content of the Addendum reflects data, clarifications, and input received up to the submission of the Final EAR/IS. There are two main sections of this addendum. The first section provides additional information and analysis that was requested by the Ministry of Natural Resources (MNR) to give additional context and support to the examination of potential effects on moose at the Project, Local and Regional scales. The second section is intended to fulfill a commitment to respond and resolve the comments received from the provincial Government Review Team and Indigenous communities on the Draft EAR/IS, associated with moose.

2 Moose

2.1 MNR-211

Comment, Rationale, and/or Proposed Action/Solution relating to Section 10.1 of Appendix F

In their comments on both the Draft and Final EAR/IS, the Ministry of Natural Resources requested additional information related to:

- Characterization of moose population status within WMU1D and Cervid Ecological Zone A;
- Justification for reliance on caribou ranges as the Regional Study Area (RSA) for moose; and
- Clarification of population-level moose monitoring beyond habitat-based indicators.

More specifically, MNR's comment on the Draft EAR/IS was:

"In the Final EA:
c) Describe existing knowledge gaps for the moose population and consider whether additional information is required to provide a rationalized impacts assessment, given that the net effect on moose was suggested to be negligible. Please also include details on monitoring of the impacts to local populations."

Their comment on the Final EAR/IS was:

"MNR Draft EA comment # 211 described several changes requested. MNR had also provided rationale/consideration for why b) and c) in the comment should not be considered "out of scope" (as per the "proponent response").

The following have not been addressed:

a) *An explicit WMU 1D profile (status, trends, allocations, success rates, etc.) and Cervid Ecological Zone A objectives are not summarized.*
b) *Further information is required (e.g., sensitivity analysis comparing WMU-scale RSA vs. caribou-range RSA for effects) for reliance on caribou ranges as the moose RSA, as it may not align with WMU-scale population management and complicates long-term harvest and/or Project impact evaluation.*
c) *Lack of clarity on how population-level moose monitoring, beyond habitat proxies, will be implemented post-construction.*

Where these are not addressed in the Wildlife and Wildlife Habitat addendum, please include a caveat that population-level impacts to moose will not be assessed because the RSA and provincial population-level information for moose are not aligned."

Response

The response below summarizes identified knowledge gaps, explains methodological constraints and outlines follow-up monitoring approaches consistent with Section 12 (Assessment of Effects on Wildlife and Wildlife Habitat) of the Final EAR/IS.

1. Existing Knowledge Gaps and Data Limitations

While the available data provide useful context for understanding moose presence and habitat conditions, several important knowledge gaps have been identified that limit the ability to fully characterize moose distribution, habitat use, and population trends within the RSA. For the purposes of this assessment, the Missisa and Ozhiski Caribou Ranges were applied as the RSA for moose, based on shared ecological linkages and predator–prey relationships with wolves (refer to Table 12-6 of Final EAR/IS).

A primary limitation relates to the large geographic extent of the RSA, which makes comprehensive moose population surveys impractical using conventional methods. Although moose surveys were completed in the Local Study Area (LSA) as part of the Project according to MNR guidelines, applying comparable survey intensity across the entire RSA is not feasible within the scope of this assessment because of logistical constraints, cost and the level of effort required.

Additional uncertainty is associated habitat mapping based on aerial imagery and remote sensing. In heavily forested portions of the RSA, dense canopy cover limits the ability to identify understory habitat features, such as preferred browse areas, canopy openings, or micro-habitats which are used in delineating moose wintering areas. This constraint resulted in low confidence in delineating and validating seasonal habitat features based on a desktop analysis alone.

Furthermore, recent and comprehensive moose population datasets within MNR databases are limited, with much of the available provincial-scale population information outdated or incomplete. In particular, recent data describing calving areas, aquatic feeding sites, and other seasonal habitats is sparse or absent from the project area. Such limitations restrict the ability to independently corroborate Project-derived habitat interpretations at broader population scales.

Additionally, no formal field surveys were conducted for certain habitat features that are difficult to identify or predict using desktop methods alone. These include mineral licks, and seeps and springs, which are features that are often spatially small, localized, and highly variable across the landscape. Locating these habitat types typically requires targeted fieldwork, fine-resolution spatial data, or detailed local ecological knowledge. Given the complexity and resource requirements involved in systematically searching for these features across a large, heterogeneous study area, such surveys were not undertaken as part of this assessment.

As a result, while available data and surveys provide valuable insight, the limitations noted above represent key areas where uncertainty remains regarding moose population conditions and habitat use across the broader RSA.

2. Rationale for Reliance on Caribou Ranges as the Moose RSA

Use of the Missisa and Ozhiski Caribou Ranges supports the evaluation of habitat-based effects, alteration in movement and predator-prey dynamics. RSA-level datasets are not spatially aligned with WMU-scale population management units, including WMU1D and therefore provincial population metrics (e.g., status, trends, success rates) cannot be reconciled with the caribou-range RSA. As a result, population-level effects on moose cannot be defensively assessed within the EAR/IS framework.

3. Recommendations for Future Monitoring and Adaptive Management

The following measures are recommended to address uncertainty and support the evaluation of effects on moose and associated predator–prey dynamics.

Wildlife–Vehicle Collision Reporting

A wildlife–vehicle collision reporting program is recommended for all Project workers and road users. The program would document moose collisions, near misses, and carcass retrievals to support assessment of mortality risk associated with the Project. Information collected through this system would support the evaluation of effects related to injury or death, as described in Section 12.7.1.4 of the Final EAR/IS.

Remote Camera Monitoring at Strategic Locations

Remote camera stations are recommended at strategic locations along the road right-of-way (ROW), including pinch points, bridge and culvert crossings, and riparian corridors known to be used by moose. These cameras would be used to monitor moose crossing behaviour, predator presence (including wolves, bears, foxes, and mustelids), and indicators of calf survival, such as the presence of calves accompanying adult cows. The data collected would support the evaluation of predator–prey dynamics described in Sections 12.3.3.4 and 12.7.1.4 of the Final EAR/IS.

GPS Telemetry and Moose Collaring Programs

As part of the follow-up program, the proponent is committed to implement a Moose Collaring Program during the pre-construction and construction phases to directly monitor moose habitat use, movement patterns, and mortality risk in the vicinity of the Project. This program would involve deploying GPS collars on a representative sample of adult moose within areas of potential influence, with a focus on adult females.

Telemetry data would be used to assess home-range shifts relative to the road, road-crossing frequency at the ROW and watercourse structures, seasonal movement patterns, and potential avoidance or use of the ROW. In addition, spatial overlap with predators, including wolves, black bears, foxes, and mustelids, would be evaluated to support assessment of predator–prey pathways identified in Sections 12.3.3.3 (Movement Alteration) and 12.3.3.4 (Predator–Prey Dynamics). The number of collars deployed, monitoring duration, collaring locations, and sample composition would be determined collaboratively with the MNR to ensure alignment with regional wildlife management objectives and integration with Indigenous Knowledge–led monitoring initiatives.

Aerial Winter Population Surveys

Periodic winter aerial population surveys are recommended at intervals of approximately every three to five years across the Moose Regional Study Area. These surveys should apply the same standardized methods used during baseline data collection, including parallel transects conducted during late winter conditions. The surveys would detect changes in population density, age and sex ratios, calf recruitment, and geographic distribution, and would ensure consistency with baseline winter surveys reported in Section 12.2.1.2.1 of the Final EAR/IS.

4. Monitoring Integration and Follow-up

Collectively, these monitoring and follow-up programs would support the evaluation of predicted effects related to alteration in movement and injury or death, as identified in Sections 12.3.3.3 and 12.3.3.4 of the Final EAR/IS. The data generated would contribute directly to validating RSA-level significance conclusions presented in Sections 12.7.1 and 12.8.1. Monitoring will also be done in collaboration with Indigenous communities. Such monitoring would directly support and respond to concerns raised through community feedback and Indigenous Knowledge input, as summarized in Sections 12.1.2 and 12.1.3, and would complement western science–based monitoring approaches.

Monitoring results and data will be incorporated into an adaptive-management framework outlined in Section 12.12, such as with other wildlife-monitoring components (e.g., remote cameras, collision reporting, predator activity monitoring), enabling timely modification of mitigation measures if unexpected changes in moose movement or survival are observed.

2.2 MNR-236

Comment, Rationale, and/or Proposed Action/Solution relating to Section 8.7.4 of the Executive Summary

In their response MNR requests justification supporting the conclusion that the Project's effects on moose will remain low and not significant throughout its lifespan.

"There is uncertainty with how predator access and increased hunting are to be mitigated to reduce the significance of impacts to moose.

In the Final EA, please justify the conclusion that the effects of the project on moose will be low and not significant throughout the life of the project."

Response

The information provided in the executive summary is intended to present a high-level overview of key findings. Detailed analyses, full citations and supporting data are provided in the main body of the EAR/IS. Readers requiring methodological detail and/or quantitative results regarding wildlife and wildlife habitat are directed to Section 12 of the Final EAR/IS.

The proposed mitigation measures for managing predator access and increased hunting pressure are expected to reduce the significance of these effects on moose because they directly address the pathways through which new linear access can elevate mortality risk. As outlined in Section 12.4.3.4 of the EAR/IS, access management measures during construction (such as controlled or restricted access, potential gating, and limiting public road use) are designed to reduce opportunities for non-Indigenous hunters to access previously remote areas. During operations, some additional hunters may apply for moose hunting tags in the area, which could result in an increased moose mortality. However, given the Project's isolation and the limited number of linear features that would be accessible, any increase in access is expected to be limited.

Additionally, it should be noted the MNR adaptively manages moose populations by controlling the allocation of moose tags. While this management is not directly applied by the Project as a mitigation measure, it provides an existing mechanism to manage changes in moose mortality at a regional scale and should be considered by the province as part of the overall mitigation approach. Given the potential for changes in moose mortality, the residual effect is characterized as **moderate** and **not significant,** as the effects are expected to be localized.

Predator-related effects are discussed separately in the response to comment **MNR-241**.

2.3 MNR-238

Comment, Rationale, and/or Proposed Action/Solution relating to Sections 12.2.2.18 and Section 12.4.3.1.1

In their response, MNR requests information regarding moose aquatic feeding areas, including identification of such areas within the LSA (and a 120m buffer), feeding classes, and an assessment based on the area lost due to construction activities.

"In the Final EA, please:

a) Provide information about moose aquatic feeding areas. Moose aquatic feeding areas should be identified within the moose LSA (11 km), including a 120m of adjacent stands of mixed or conifer forest around high potential (Class 3) and very high potential (Class 4) moose aquatic feeding areas (see OMNR. 1998. Selected Wildlife and Habitat Features: Inventory Manual. Toronto: Queen's Printer for Ontario). Feeding classes that are ranked as high and very high are considered candidate significant wildlife habitat areas.

b) Identify moose aquatic feeding areas within the moose LSA (11 km), determine their area, and add it to the total area that will be lost due to construction activities (as stated in Section 12.7.1.1). If possible, these habitats should be avoided during construction."

Response

A desktop review was undertaken to identify potential aquatic feeding habitats for moose within the study areas; however, this method carries inherent limitations. Moose aquatic feeding areas, which are typically shallow wetlands, ponds, and shoreline zones supporting submerged and emergent vegetation, are small, dynamic, and strongly seasonal. As noted in Section 12.1.4.1 of the Final EAR/IS (Selection of Key Species and Species Groups – Ungulate - Moose), these habitats are primarily used during summer and early fall when aquatic vegetation is accessible and ambient temperatures are high.

Available imagery across the Project area is often outdated, captured during leaf-off or frozen conditions, or too coarse to identify patches of aquatic vegetation. While acquiring high resolution satellite imagery is possible, it is cost prohibitive across a region as large as the moose LSA. As a result, desktop screening is unable to reliably identify functional summer feeding sites. If a conservative precautionary approach was taken, identify all bays, shallow shorelines as potential habitat, a desktop exercise would likely overestimate the number and extent of potential feeding habitats, rather than under-identify them.

Confirming aquatic feeding sites typically requires aerial surveys conducted during appropriate ice-free conditions, when aquatic vegetation beds are visible. These types of targeted habitat confirmation methods are used in the identification of other moose Significant Wildlife Habitat (SWH) features, such as late-winter cover and movement corridors (Section 12.2.2.1.10). At this time aerial verification surveys in the required season have not been completed. Without this field confirmation, any desktop-mapped dataset would provide a very conservative and likely greatly inflated estimate of potential aquatic feeding habitats.

To address this limitation, the Project commits to conducting field verification during detail design phase of the Project, focused on the 1-km LSA centred on the road corridor. This commitment aligns with the approach already applied to refine other moose habitat features (e.g., SWH confirmation during later phases; see Section 12.4.3). During detail design phase (i.e., after to EA/IA process), site-specific ground and aerial assessments will be undertaken to identify actual aquatic feeding areas, assess their ecological value, and incorporate avoidance measures, alignment refinements, or mitigation where required to reduce potential effects on moose.

2.4 MNR-239

Comment, Rationale, and/or Proposed Action/Solution relating to Section 12.3.3.4

In their response, MNR requests references relevant to northern Ontario regarding black bear predation on moose calves, and additional references related to moose using roads to evade predators.

"Within the Final EA, please:

a) Provide reference(s) that are relevant to northern Ontario, regarding black bears preying on moose calves.
b) Provide citation for Berger (2007) in the reference section.
c) Provide alternate reference(s) that demonstrates moose using roads as a refuge from predators or delete the sentence."

Response

The statement that "roads may also increase availability of food through roadkill and litter, which may facilitate expansion of boreal scavenging species, such as black bears that prey on moose calves" (refer to Section 12.7.1.4 of the Final EAR/IS) reflects the ecological principle that new linear infrastructure can inadvertently create localized food subsidies for generalist scavengers. Roadkill and human-generated litter can attract bears and other scavengers to roadside environments.

This pattern has been documented in British Columbia where bears were documented repeatedly congregating at roadkill disposal sites in response to the recurrent availability of carcasses (Lamb 2019). This pathway is relevant to moose because black bears in Canada are confirmed predators of moose calves. A peer-reviewed study from northern Ontario reported that moose, including moose calves (4.3%), formed part of the black bear diet during the calving season, with consumption highest in early spring when calves are most vulnerable (McLaren et al. 2021). Additional Canadian research using molecular diet analysis in Newfoundland also detected moose DNA in black bear scats, further demonstrating that black bears opportunistically prey on moose, including calves, when available (Pugesek et al. 2021).

Collectively, these Canadian studies support the conclusion that roadside food subsidies (e.g., roadkill, and attractants associated with improper waste management) may draw black bears toward road corridors and that black bears can exert localized predation pressure on moose calves. This evidence supports the relevance of this effect pathway for cumulative effects assessment for moose.

Construction and operation of the Webequie Supply Road will introduce a linear corridor that may increase predator access, particularly for wolves, by providing an efficient travel route along the cleared right-of-way. This mechanism is described in the assessment of moose injury or death due to predator-prey dynamics (Sections 12.3.3.4, 12.7.1.4, Tables 12-62 and 12-63).

The statement regarding roads functioning as a refuge for moose from predators has been removed. Research in Ontario indicates that moose may partially avoid roads in response to sensory disturbance and habitat fragmentation (Sections 12.3.3.3, 12.7.1.3). However, individuals may still use road corridors opportunistically to avoid deep snow or access browse. Additionally, moose may continue to use riparian movement pathways that intersect the road, where they remain vulnerable to increased predator encounter rates facilitated by the ROW. These direct effects are spatially limited to the Moose LSA, consistent with the spatial boundary rationale outlined in Section 12.1.5.1 of the Final EAR/IS. As a result, no measurable population-level effects are expected within the RSA (Sections 12.7.1, 12.8.1). See response to **MNR-241**.

2.5 MNR-241

Comment, Rationale, and/or Proposed Action/Solution relating to Section 12.3.3.5

In their comment, MNR requests reassessment of threats to the moose population from predators due to increased access.

"Please reassess the threats to moose from predators and increased access in light of the provided references and any others that may be applicable, for the Final EA."

Response

The assessment acknowledges that local predator–prey interactions between wolves and moose will change in proximity to the Project, as predators may use the linear corridor to travel more efficiently (Sections 12.3.3.4, 12.7.1.4). However, significance is evaluated at the RSA scale, where both wolf and moose populations occur at relatively low densities and exhibit low interaction rates. As a result, the assessment concludes that these localized changes are unlikely to result in a measurable population-level effect (Sections 12.7.1, 12.8.1).

In their comment, MNR suggests that predators could have a moderate effect on moose populations in the RSA. However, the cited studies largely reflect conditions in landscapes characterized by dense networks of linear features. For example, Wattles et al. (2018) and Boucher et al. (2022) examined predator-prey dynamics in areas with extensive road or anthropogenic linear networks, which differ substantially from conditions within the WSR project area. When controlling for disturbance level, Vanlandeghem et al. (2021) found that wolves were more successful in landscapes characterized by high levels of habitat fragmentation associated with forest management.

Additional references regarding the use of powerlines by wolves do not fully account for the importance of minimizing the probability of human encounters in wolf habitat selection. Roads and powerlines differ in traffic volume, human presence, and associated disturbance, which results in different encounter risks for wolves (Zimmerman et al., 2014). As such, findings related to predator use of utility corridors are not directly transferrable to a road-based access corridor.

Unlike studies examining landscapes affected by extensive, multi-road forest management networks, where higher wolf predation success has been documented in highly fragmented landscapes, the WSR represents a single, isolated linear features rather than a road network. Consequently, it does not create the same degree of landscape-scale fragmentation or predator access documented in those studies. This distinction is consistent with findings from the Marten Falls Community Access Road net-effects assessment, which similarly identified low predator-prey impacts associated with single linear corridor rather than a network of access routes (MFCAR, 2026). Furthermore, the EAR/IS evaluates the WSR individually, with other reasonably foreseeable projects addressed separately within the Cumulative Effects Assessment (Section 21 of the Final EAR/IS), in accordance with federal and provincial assessment frameworks (Section 12.1).

Collectively, these considerations support the conclusion that while localized changes in predator–prey dynamics will occur near the ROW, the overall net effect on moose populations remains low in magnitude and not significant at the RSA scale.

2.6 MNR-249

Comment, Rationale, and/or Proposed Action/Solution relating to Section 12.7.1.3 and Table 12-63

In their comment, MNR requests reassessment of threats to moose population from predators due to increased access.

"Please reassess the results from increased predator access.

In addition to the predicted impacts of moose from changes in predator-prey dynamics at the regional scale, please include the anticipated impacts to moose within the LSA (11km)"

Response

The Project team acknowledges at the LSA scale (11 km), that localized changes in predator–prey dynamics may occur near the roadway right-of-way, where predators—particularly wolves—may use the cleared corridor as a more energetically efficient travel route. These effects are expected to be spatially limited and confined primarily to areas immediately adjacent to the ROW. The population of moose within the vicinity of the road may also be affected by moose avoidance of the road (Laurien et al. 2012), however this avoidance is limited in distance and depends on season and road type. Laurian et al. (2010) found Moose usually avoided road proximity up to ≥500 m. Even if we assume double this distance it is less than one tenth of the Moose LSA.

Concerns raised by MNR regarding increased predator access appear to reflect broader land-use scenarios involving the development of extensive future road networks. If such networks were to materialize, their effects would appropriately be addressed through a cumulative effects framework, rather than as direct effects attributable to a single, isolated road. The WSR represents a single linear feature, not a network comparable to systems examined in studies showing increased predator efficiency in heavily road-fragmented landscapes (e.g., extensive forestry road networks) (Vanlandeghem et al. 2021). As such, the WSR does not create the same magnitude of landscape-level fragmentation or predator access that underpins the findings of those studies.

In terms of hunting, as discussed in **MNR-236 and MNR-251**, given the Project's isolation and the limited number of linear features that would be accessible, any increase in access is expected to be limited. Access management measures will be in place during construction, and a limited number of linear features would be accessible during operations. Additionally, the distance hunters travel from roads is relatively short. Stedman et al. (2004) found an average maximum distance hunters reached from a road was 0.84 km.

Our conclusion aligns with other northern Ontario EA findings, including the Marten Falls Community Access Road (MFCAR), where similarly low net effects were identified due to the presence of a single corridor rather than a network. Temporary access roads are scheduled for restoration and will decrease as travel corridors as regeneration occurs. Based on this approach, while localized increased predator–prey interactions are expected near the ROW, the net effect is expected to be low in magnitude and not significant at the RSA scale, which is the scale of assessment for significance determination under the EA.

Please see comments MNR-236 and MNR-241 for more details.

2.7 MNR-250

Comment, Rationale, and/or Proposed Action/Solution relating to Section 12.7.1.4, Table 12-64 and Table 12-65

In their comment, MNR requests revisions to summary tables.

"Please revise this summary tables (12-64 and 12-65) based on comments made on previous tables in this section."

Response

The net effects for the WSR are evaluated at the RSA scale, which is the required level for determining population-level significance under the federal and provincial assessment frameworks. While localized changes in wildlife interactions, including shifts in movement or predator activity near the right-of-way, may occur within the LSA, these effects do not translate into measurable impacts at the RSA scale, where both moose and predator populations occur at low densities and exhibit low baseline interaction rates (Sections 12.7.1 and 12.8.1). The summary tables (12-64 and 12-65) have been reviewed and revised, as applicable, to reflect this assessment approach and comments provided on earlier tables in this section.

One change to the summary tables is acknowledged. While the initial duration of the net effects was made on an assumed 75-year operational period for the Project, the Project team acknowledges that the road will likely be maintained in some capacity beyond that timeframe. Accordingly, the duration of net effects has been revised in the tables to be characterized as permanent and irreversible. Based on these revisions, the Project's predicted net effects are characterized as low in magnitude, localized in extent, permanent and irreversible, and not significant at the population scale.

Please see comment **MNR-241** for more details.

2.8 MNR-251

Comment, Rationale, and/or Proposed Action/Solution relating to Sections 12.8.1 and Section 12.8.1.4

In their comment, MNR requests reassessment of significance from predators and hunters due to increased access.

"Please reassess the significance of increased predator and hunter access net adverse effects, based on the recommended re-evaluation of results mentioned in the previous comments."

Response

Determination of significance within the EA is based on the predicted net effect would "*alter biological diversity and/or ecosystem function to such a degree that species and/or vegetation communities could not sustain themselves*" (Section 12.8).

For moose population impacts, the EAR/IS evaluates significance at the RSA scale. As such, any localized changes to predator–prey interactions along the WSR, including increased movement efficiency for predators along the cleared corridor, do not necessarily translate into population-level effects (Sections 12.7.1 and 12.8.1). While predators may opportunistically use the ROW and thereby increase encounter potential with moose within a few kilometres of the road (Sections 12.3.3.4 and 12.7.1.4), both predator and moose densities within the RSA are low. The results are low baseline interaction rates and a correspondingly low magnitude of change attributable to the Project.

The EAR/IS clearly defines the WSR as a single linear corridor within otherwise largely continuous boreal forest, which does not create the same level of fragmentation, or corresponding changes in predator success documented in landscapes with extensive road networks (see **MNR-241**). Any future road development by other proponents is assessed separately within the Cumulative Effects Assessment (Section 12.9 and the full cumulative analysis in Section 21 of the Final EAR/IS).

With respect to hunting pressure, baseline Indigenous harvesting already occurs within both the LSA and RSA and contributes to existing moose mortality. While the Project may result in some redistribution of harvest locations and limited opportunistic hunting, the net effect of these harvests is not anticipated to exceed thresholds relevant to population sustainability. It is acknowledged that quantifying hunting/harvesting levels is challenging, as indigenous hunters are not required to report harvest data.

Non-Indigenous hunting pressure is currently very low within the RSA, and a substantial increase is considered unlikely given the long travel distances and comparatively more difficult access to the Project area relatively to existing southern hunting regions. As a result, any increase in hunting-related moose mortality in the RSA is expected to remain moderate in magnitude, local in nature and non-significant, consistent with the overall significance determination for moose.

2.9 MNR-252

Comment, Rationale, and/or Proposed Action/Solution relating to Section 12.8.1.4

In their comment, MNR requests reassessment of significance from predators and hunters due to increased access.

"In the Final EA, MNR recommends revisiting the scoring system. For example, by reclassifying scores in the 11–15 range (Moderate) as indicating significant effects."

Response

In response to MNR's recommendation to revisit the scoring system, the effects assessment methodology in the Final EAR/IS was revised from the quantitative numerical scoring framework used in the Draft EAR/IS to a qualitative, criteria-based significance determination. This revised approach evaluates significance based on defined ecological criteria and context, rather than numerical score thresholds, and is applied consistently across all valued components, including moose. As a result, reclassification of numerical score ranges (e.g., Moderate scores in the 11–15 range) is no longer applicable in the Final EAR/IS. Significance conclusions for Moose related to increased predator and hunter access are instead determined based on the qualitative assessment of net effects at the appropriate spatial scale, consistent with the revised significance framework described in Section 12.8.

3 Wildlife – General

3.1 MNR-194

Comment, Rationale, and/or Proposed Action/Solution relating to Section ES 8.7.3.4

In their comment MNR requests additional information on effects on wildlife due to air quality along with mitigation measures.

"Please expand on potential implications to air quality and wildlife from dust deposition during the Project phases and what mitigation measures will be applied to reduce impacts, and how this may change over time."

Response

The MNR comment pertains to the executive summary, which is intended to summarize the information presented in Section 12 of the Final EAR/IS. Detailed discussion of air-quality-related effects on wildlife is provided within that section. Air emissions and the deposition of dust are identified in the EAR/IS as potential project interactions during both construction and operations (refer to Table 12-7, Project Interactions with Wildlife and Wildlife Habitat VC and Potential Effects).

Although Section 12 focuses primarily on wildlife pathways, information relevant to potential effects on wildlife and wildlife habitat from changes in air quality and dust deposition is incorporated throughout the discussion of habitat alteration or degradation, sensory disturbance, and alteration in movement in Sections 12.3, 12.4, 12.6.1, 12.7 and 12.8.

1. Potential Implications to Air Quality from Dust Deposition

Air Quality Effects

During construction, dust emissions arise from vegetation clearing, grubbing, heavy-equipment use, aggregate extraction, and travel on unpaved roads. Section 12.3.2 identifies that dust deposition may exceed ambient air quality criteria in areas adjacent to the ROW, with construction-phase deposition predicted to reach up to 10 g/m² (143% of provincial ambient air quality [AAQC]) and 4.3 g/m² (61% of AAQC) during operations at distances up to 50 m from the source.

Air Quality – Ecological Pathways

Although detailed air modelling appears in other EAR/IS sections, Section 12 recognizes that air emissions and dust deposition may influence wildlife habitat through the following ecological pathways:

- Vegetation smothering and temporarily reduced photosynthetic ability;
- Localized changes to soil chemistry or soil nutrient conditions that may reduce plant vigor; and
- Changes in vegetation composition, including the potential for increased abundance in disturbance-tolerant or invasive species.

These pathways link directly to wildlife habitat alteration mechanisms discussed in Section 12.3.2.1 (Habitat Alteration or Degradation).

2. Implications of Dust Deposition for Vegetation and Wildlife Habitat

Dust deposition can have indirect but ecologically meaningful effects on wildlife through its influence on vegetation structure, food availability, and overall habitat quality (Section 12.3.2).

While the EAR/IS acknowledges fugitive dust emissions primarily within the air quality context, implications for vegetation and wildlife can be inferred from the pathways of habitat alteration, sensory disturbance, and foraging habitat degradation presented throughout Section 12 of the Final EAR/IS. Dust deposition has the potential to affect vegetation health and wildlife foraging resources, especially for birds and bats; however, the application of dust control measures, vegetation protection, and long-term monitoring is expected to reduce these effects over time.

Vegetation Effects (Changes in Habitat Quality)

Consistent with Section 12.3.2.1, dust-related effects on vegetation may include:

- Reduced productivity of shrubs, lichens, mosses, and ground flora that provide forage for moose, birds, and small mammals;
- Smothering of leaves and needles, which can inhibit gas exchange and photosynthetic efficiency;
- Transportation of harmful chemicals or nutrients which alter substrate and water conditions;
- Localized influences on soil nutrient cycling, particularly in nutrient-poor bog and fen systems; and
- Increased susceptibility of stressed native vegetation to pests and pathogens.

Wildlife Effects via Habitat Alteration

Across species-specific Sections 12.3.3 to 12.3.12, dust and airborne particulates are identified as contributing stressors within broader habitat-alteration pathways, including:

- Reduced foraging habitat quality for moose (due to effects on browse species);
- Habitat edge effects (i.e., altered understory density and cover) that can increase exposure to predators or competitors;
- Altered insect availability, potentially affecting the foraging success of songbirds and bats;
- Localized degradation of herpetofauna habitat; and
- Localized changes in wetland vegetation, influencing waterfowl brood-rearing and staging habitat.

The EAR/IS notes that approximately 1–2% of high-use habitat area may be affected for some key species groups due to cumulative habitat alteration and degradation pathways, based on RSF modelling summaries presented in Section 12.7 of the Final EAR/IS.

3. Implications for Bird and Bat Foraging Habitat

Birds – Foraging Effects

Dust deposition may reduce foraging habitat suitability for certain avian and bat species through indirect effects on vegetation conditions and prey availability, including:

- Forest songbirds and wetland songbirds (Sections 12.3.7 and 12.3.8), which rely on healthy ground and shrub layers for foraging;

- Waterfowl (12.3.9), where aquatic vegetation or shoreline vegetation may be affected; and
- Shorebirds (12.3.10), where invertebrate availability could decline if substrates are coated by fine sediments.

Such effects may influence breeding success, migration stopover quality, and overall energy budgets but are expected to be localized in extent.

4. Temporal Changes in Dust-Related Effects

Construction Phase:

- Highest dust deposition levels;
- Rapid changes to vegetation near the ROW; and
- Greatest potential for acute habitat degradation and short-term wildlife displacement.

Operations Phase:

- Lower but ongoing dust emissions associated with road use and aggregate operations;
- Potential for gradual vegetation community stabilization, or localized shifts;
- Slow recovery of dust-affected vegetation near the ROW; and
- Persistent edge effects and gradual habitat fragmentation.

Overall, dust-related impacts are expected to decrease in magnitude following the cessation of construction; however, residual long-term effects on vegetation communities and wildlife use patterns may persist in areas closest to the ROW.

5. Mitigation, Monitoring and Adaptive Management

Dust Control Measures

General environmental mitigation measures in Section 12.4 include the following:

- Application of water or dust suppressants on exposed soils and unpaved roads;
- Stabilization or covering of soil and aggregate stockpiles;
- Progressive rehabilitation of disturbed soils (Section 12.4.1); and
- Vegetation buffers, maintaining intact vegetation wherever possible.

Additional dust suppression measures are provided in Appendix E of Final EAR/IS and will also be included into the Construction Environmental Management Plan and Operation Environmental Management Plan.

Wildlife-Specific Mitigation Linked to Dust Pathways

Dust mitigation measures are integrated with wildlife habitat and movement mitigation strategies in Section 12.4, including:

- Minimization of clearing widths to reduce exposed soil (Section 12.4.2.1);
- Retention of vegetation screens that help intercept dust (Section 12.4.2.2);
- Implementation of seasonal timing windows to avoid sensitive wildlife life-cycle periods (Sections 12.4.1, 12.4.2, 12.4.3, 12.4.5 and 12.4.6); and
- Maintenance of natural movement corridors to offset localized degradation in foraging areas (Section 12.4.2.3).

Monitoring and Adaptive Management

Section 12.12 (Follow-up and Monitoring) outlines a framework to:

- Monitor air quality and vegetation responses;
- Assess wildlife use of adjacent habitats; and
- Implement additional mitigation if dust deposition results in unanticipated effects.

3.2 MNR-201

Comment, Rationale, and/or Proposed Action/Solution relating to Section 5.1 of Appendix E

In their comment, MNR requests verification of mitigation effectiveness, and modification as required.

"In the Final EA, please:

b) Reconsider the effectiveness of mitigation measure # 11 as described and modify the approach appropriately."

Mitigation Measure #11 in Section 5.1 of Appendix E (Clearing and Grubbing) of the Final EAR/IS has been reviewed for effectiveness and remains appropriate as described. This measure states that vegetation removal will be conducted mechanically except within 15 m of a waterbody, where removal will be undertaken manually, with the undergrowth and duff layer retained to prevent soil disturbance and erosion. The measure is consistent with Section 5.16 of Appendix E (Erosion and Sediment Control), which similarly requires hand-clearing within 15 m of watercourses to avoid disturbance of the organic soil layer, demonstrating internal consistency across the mitigation framework.

This measure is effective in minimizing potential environmental effects because it preserves root systems and the duff layer, both of which are critical for maintaining slope stability and erosion resistance. This approach aligns with the Clearing and Grubbing requirements in Section 5.1, which prioritize minimizing ground disturbance, particularly in sensitive areas. It also supports erosion and sediment control provisions that emphasize equipment setbacks, maintenance of natural ground cover and progressive stabilization near waterbodies.

Further increasing the vegetation-clearing buffer beyond 15 m is not expected to appreciably enhance how potential effects on waterbodies are managed. Those effects are already addressed through multiple, complementary mitigation measures that are to be implemented for the Project, such as 50-m setbacks for material storage, restrictions on in-water work, required erosion and sediment control, and ground stabilization requirements applied prior to and during construction.

These measures work together to reduce soil disturbance and maintain stable conditions near waterbodies. The existing approach therefore remains appropriate, balances environmental protection with constructability, and does not warrant modification to Mitigation Measure #11.

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