Impact Assessment Agency of Canada
Agence d'évaluation d'impact du Canada

Marten Falls Community Access Road

DRAFT IMPACT ASSESSMENT REPORT

May 2026

Canada

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Executive Summary

The Impact Assessment Agency of Canada (IAAC) conducted an impact assessment of the Marten Falls Community Access Road (the project) proposed by Marten Falls First Nation (the proponent) according to the requirements of the *Impact Assessment Act* (IAA). The proponent is proposing the construction and operation, including maintenance, of an all-season multi-use community access road approximately 184 kilometres in length, connecting the northern end of Painter Lake forestry road to the community of Marten Falls. Marten Falls is located at the junction of the Albany and Ogoki rivers, approximately 170 kilometres northeast of Nakina, Ontario. As proposed, the project could enable future access to potential mineral development activities in the Ring of Fire area.

The impact assessment was carried out in coordination with the Government of Ontario, who conducted a comprehensive environmental assessment under its *Environmental Assessment Act*. IAAC worked with the province to align the federal impact assessment with the provincial environmental assessment.

- In addition to coordination with the Government of Ontario, IAAC collaborated with federal authorities, Indigenous communities, and other participants to assess the likely effects of the project.
- IAAC consulted and engaged with Indigenous communities throughout the impact assessment in a manner consistent with Canada's commitment to reconciliation and the principles of free, prior and informed consent. IAAC considered Indigenous Knowledge that was provided to inform the impact assessment.
- IAAC worked with the proponent, considering information presented in its Impact Statement and other submissions.
- IAAC considered specialist or expert information or knowledge from federal authorities, including Environment and Climate Change Canada, Fisheries and Oceans Canada, Natural Resources Canada, Transport Canada, Indigenous Services Canada, Health Canada, Women and Gender Equality Canada and Public Health Agency of Canada.
- IAAC engaged with the public, inviting comments at various points during the impact assessment, and considered input received.

This draft Impact Assessment Report (draft IA Report) provides information about the impact assessment and sets out IAAC's rationale and conclusions. It also provides a summary of the consultation process with Indigenous communities that was conducted in order to fulfill the federal Crown's duty to consult.

IAAC's impact assessment took into account the project's likely non-negligible "adverse effects within federal jurisdiction" and "direct or incidental adverse effects" (collectively referred to as "adverse federal effects"). IAAC considered a range of effect pathways that

could result in adverse federal effects. For example, IAAC considered changes to boreal caribou populations as a pathway to an adverse federal effect on “the current use of lands and resources for traditional purposes by Indigenous Peoples”, given concerns raised by Indigenous communities during the assessment. The report is focused on adverse federal effects and effects pathways that are key issues. Where likely residual adverse federal effects were predicted to occur after the implementation of mitigation measures, IAAC assessed cumulative adverse federal effects, that is, effects that are likely to result from the residual effects of the project interacting with effects from other physical activities. IAAC’s conclusions regarding the likelihood of significance of adverse federal effects are summarized in Table 1.

Table 1: IAAC’s conclusions on adverse federal effects

Adverse federal effect	IAAC conclusion
Effects on fish and fish habitat	Residual effects and cumulative effects to which the project contributes are likely to be significant to a low extent, due primarily to degradation and loss of habitat that may not be fully compensated but that would have limited spatial and temporal overlaps with effects from other projects.
Effects on migratory birds	Residual effects and cumulative effects to which the project contributes are not likely to be significant, as mitigation measures would limit infrequent residual effects to the CDA, with minimal spatial and temporal overlap with effects from other projects.
Effects resulting from physical activities carried out on federal lands (Marten Falls First Nation reserve)	Residual effects are not likely to be significant, as mitigation measures are expected to maintain sustainable species’ populations and air contaminant levels generally below applicable guidelines. Cumulative effects to which the project contributes are not likely to be significant, except for cumulative effects to caribou and wolverine habitat, which are likely to be significant to a low extent due to habitat loss and degradation on the Marten Falls First Nation reserve interacting with habitat changes from other projects throughout the species’ respective ranges.
Effects on the environment on federal lands (Marten Falls First Nation reserve)	The likely effects to the environment on federal lands are considered within the assessment of effects resulting from activities carried out on

Adverse federal effect	IAAC conclusion
	federal lands. No other effects to the environment on federal lands are likely.
Direct or incidental adverse effects from: • *Canadian Navigable Waters Act* work approvals; • *Fisheries Act* authorization(s); • *Species at Risk Act* permit(s); and • *Explosives Act* explosives license(s).	The likely direct and incidental adverse effects associated with federal permits are considered within the assessment of effects on fish and fish habitat, migratory birds, effects on the environment on federal lands and impacts on Indigenous Peoples and their rights throughout the draft IA Report. IAAC considered adverse effects from the legislation that are relevant to the project, but notes that only work approvals under the *Canadian Navigable Waters Act* are likely to be required. No other direct or incidental adverse effects are likely.
Effects on current use of lands and resources for traditional purposes by Indigenous Peoples	Residual effects and cumulative effects to which the project contributes are likely to be significant to a low extent, due to alterations to the practice of traditional activities including fishing, hunting, trapping, and plant harvesting through changes in resource availability, safe access and quality of experience away from some preferred sites as well as localized reduced safe access and quality of experience. Cumulative effects to which the project contributes are likely to be significant to a low extent for traditional activities except for hunting of caribou and other ungulates, for which the effects would be significant to a moderate extent, given that the project in combination with other foreseeable projects would alter movement patterns and range areas, affecting the availability of the resources.
Effects on the physical and cultural heritage of Indigenous Peoples and effects on structures, sites or things of historical, archaeological, paleontological or architectural significance to Indigenous Peoples	Residual effects and cumulative effects to which the project contributes are likely to be significant to a low extent, due primarily to physical damage or degradation of sites of importance and change to safe access to portions of some sites of importance.
Effects on the health, social or economic conditions of Indigenous Peoples	Residual effects are likely to be significant to a low extent, mainly through the strain placed on social infrastructure and the ability to pass on Indigenous Knowledge. Cumulative effects to

Adverse federal effect	IAAC conclusion
	which the project contributes are likely to be significant to a moderate extent, as the strain from the project would combine with similar effects resulting from other reasonably foreseeable projects and would be facilitated by the ease of access to, and means of influence of, the remote Indigenous communities provided by the project.

The impact assessment also took into account the adverse federal effects of malfunctions and accidents that may occur in connection with the project.

Once this draft IA Report is finalized, it will be provided to the Minister of the Environment, Climate Change and Nature (the Minister). The Minister will decide whether the adverse federal effects indicated in the IA Report are likely to be significant, and, if so, the extent of their significance. If applicable, the Minister will then decide if the significant adverse federal effects are justified in the public interest based on the report and the decision-making factors set out in section 63 of the IAA. Table 2 identifies these factors and presents IAAC's summary conclusions regarding these factors. Alternatively, the Minister may pass these decisions to the Governor in Council.

Table 2: IAAC's conclusions regarding factors to be taken into account in considering whether significant adverse federal effects are justified in the public interest

Factor	IAAC conclusion
The impact that the likely effects of the project may have on any Indigenous group and any adverse impact that those effects might have on Indigenous rights (Sections 4.3 and 4.4)	The project is likely to result in adverse effects on Indigenous Peoples, as described in Table 1. In addition, the likely effects of the project would have positive economic impacts for Indigenous Peoples and provide opportunities for self-determination. With regards to Indigenous People's rights as recognized and affirmed by section 35 of the *Constitution Act, 1982*, the project is likely to cause adverse impacts. Specifically, low to moderate severity of impacts on the right to hunt and trap, low severity of impacts on the right to fish, and low to moderate severity impacts on the right to a continued way of life for Indigenous communities that would be most directly impacted or reported some uses in the CDA: Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, and Marten Falls First Nation;

Factor	IAAC conclusion
	and negligible to moderate severity of impacts on the right to hunt and trap, negligible to low severity of impacts on the right to fish, and negligible to moderate severity of impacts on the right to a continued way of life for Indigenous communities whose preferred areas for the exercise of harvesting and cultural rights have limited overlap with the geographic scope of anticipated project effects: Attawapiskat First Nation, Constance Lake First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Long Lake #58 First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation.
The extent to which the likely effects of the project contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change (Sections 5 and 6)	The likely effects of the project do not contribute to meeting Canada's environmental obligations, specifically as it relates to biodiversity as adverse effects of the project on species at risk, including caribou and wolverine, are predicted to remain. IAAC considered the adverse federal effects in Table 1 and effects on species at risk to inform its analysis. The likely effects of the project do not contribute to meeting Canada's climate change commitments, specifically greenhouse gas (GHG) emission targets as the GHG emissions from the project would continue beyond 2050 and there is overall uncertainty on whether the project infrastructure could contribute indirectly to Canada's ability to meet its climate change commitments in the long term. IAAC considered the adverse federal effects in Table 1 and effects on net GHG emissions to inform its analysis.
The extent to which the likely effects of the project contribute to sustainability (Section 7)	The likely effects of the project would result in net positive contributions to sustainability to a low extent, notably through positive effects on employment and the economy as well as community well-being, economic reconciliation and self-determination for Marten Falls First Nation. IAAC's analysis also considered adverse federal effects, notably on use of lands for traditional practices by Indigenous Peoples, in the context of changes to the environment and the transfer of Indigenous Knowledge.

A comment period is being held on this draft IA Report, along with draft potential conditions. Following the comment period, IAAC will finalize this IA Report to support decision making.

In addition to the impact assessment, the project may require federal permits for specific activities, including *Canadian Navigable Waters Act* work approvals, *Fisheries Act* authorization(s), *Species at Risk Act* permit(s) and *Explosives Act* explosives license(s). If it is decided that any likely significant adverse federal effects are justified in the public interest, IAAC will continue to coordinate the federal permits required for the project.

IAAC also notes that the Regional Assessment in the Ring of Fire Area is underway. While it is not a decision-making process, it aims to provide Indigenous communities with access to information on current and future conditions within their traditional territory, which would be available to support and inform future decision-making in the Ring of Fire area. The suite of measures including funding, research and data platforms, and other initiatives that will be provided through the Regional Assessment will be an additional means by which Indigenous communities will have access to information on conditions within their traditional territory to support and inform future decision-making.

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List of abbreviations and acronyms

Abbreviation/Acronym	Definition
ARD/ML	Acid rock drainage or metal leaching
CDA	Construction disturbance area
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
FPIC	Free, Prior and Informed Consent
GBA Plus	Gender-based Analysis Plus
GHG	Greenhouse gas
IAAC	Impact Assessment Agency of Canada
IAA	*Impact Assessment Act*
IA Report	Impact Assessment Report
IEPP	Indigenous Engagement and Partnership Plan

Abbreviation/Acronym	Definition
LSA	Local study area
MECP	Ontario Ministry of the Environment, Conservation and Parks
Minister	Minister of the Environment, Climate Change and Nature
MNR	Ontario Ministry of Natural Resources
project	Marten Falls Community Access Road
proponent	Marten Falls First Nation
RSA	Regional study area
SARA	*Species at Risk Act*
TISG	Tailored Impact Statement Guidelines

Glossary

The table below defines or explains key terms or phrases that are used in this draft IA Report. Refer to section 2 of the *Impact Assessment Act* for key terms that are defined under that Act.

Term/Phrase	Definition/Explanation
Adaptive management	Adaptive management, in the context of impact assessment, is a planned and systematic process to respond to uncertainty around predicted project effects or the effectiveness of mitigation measures. It ensures timely and meaningful actions are taken to respond to adverse outcomes and allows for learning from the results of the actions that are taken. Adaptive management plans for specific issues can be required in addition to a follow-up program.

Term/Phrase	Definition/Explanation
Adverse federal effects	Collectively refers to two types of non-negligible effects defined in section 2 of the *Impact Assessment Act*, summarized here: "adverse effects within federal jurisdiction" (includes non-negligible adverse effects caused by a project to fish and fish habitat; to marine plants (which are included in addition to fish as "aquatic species"); to migratory birds; to the marine environment outside of Canada caused by pollution; to boundary waters, international waters, and interprovincial waters caused by pollution; to the environment on federal lands; to Indigenous Peoples; and the adverse effects of any federal work or undertaking or activity occurring on federal lands); and "direct or incidental adverse effects" (such as non-negligible adverse effects directly linked or necessarily incidental to a federal permit required for the project).
Dewatering	Removal or draining groundwater or surface water from an area within a construction site by pumping or evaporation.
Marine plants	As defined in the *Fisheries Act*, includes all benthic and detached algae, marine flowering plants, brown algae, red algae, green algae and phytoplankton.
Critical habitat	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 (*Species at Risk Act* (section 2(1)).
Cumulative effects	Effects likely to result from the project's residual effects in combination with other physical activities that have been or will be carried out.
Effect pathway / Pathway of effect	A cause-and-effect linkage between a project and a valued component.
Equalization culvert	Culverts placed to balance water head and elevation on both sides of an embankment and reduce possible water seepage flow.

Term/Phrase	Definition/Explanation
Fish	As defined in the *Fisheries Act*, “fish” includes fish and fish parts, as well as shellfish, crustaceans, marine animals and their parts, and the eggs, sperms, spawn, larvae, spat and juveniles stages of these animals.
Fugitive dust	Particulate matter, often sand or mineral dust, released to the atmosphere by mechanical disruption of soil or by wind scouring.
Heritage resources	A land or resource (e.g., an artifact, object, or place) that is considered as heritage or any structure, site, or thing distinguished from other lands and resources by the value placed on it.
Hydrology	Hydrology is the study of water, whether flowing above ground, frozen in ice or snow, or retained by soil.
Migratory birds	Birds identified and protected by the *Migratory Birds Convention Act, 1994* and listed in the schedule to that act.
Peat	Peat is partially decomposed organic material formed in waterlogged, low-oxygen conditions, often in cool environments
Peatland	Peatlands are wetlands with at least 40 cm of accumulated peat, including types such as bogs, fens, swamps, and marshes, which vary based on environmental conditions.
Residual effect	An effect expected to result from the project that is predicted to remain after the application of mitigation measures.
Sedimentation	A process in which solid particulates, or sediments, are formed or deposited.
Social infrastructure	Social infrastructure is the physical spaces, facilities, and organizations that support social connection, trust, civic participation, and a sense of belonging. It acts as the foundation for social cohesion and resiliency within a community.

Term/Phrase	Definition/Explanation
Species at risk	Any species listed in Schedule 1 of the *Species at Risk Act*. This does not include species recommended for inclusion in Schedule 1 by the Committee on the Status of Endangered Wildlife in Canada, nor species that are listed under only provincial legislation.
Turbidity	Measure of the lack of clarity or transparency of water caused by biotic and abiotic suspended or dissolved substances. The higher the concentration of these substances in water, the more turbid the water becomes.
Valued component	An element of the natural or human environment that may be impacted by the project and is of value to participants.
Watershed	The area of land that drains into a body of water like a lake, river, or stream.
Wetland	A wetland is an ecosystem where the soil is either permanently or temporarily saturated with water. They contain plants adapted to very wet soil. Examples of wetlands include marshes, swamps, bogs and shallow open water.

1 Introduction to the project and impact assessment process

The Impact Assessment Agency of Canada (IAAC) coordinated an impact assessment with the Government of Ontario for the Marten Falls Community Access Road (the project) proposed by Marten Falls First Nation (the proponent) according to the requirements of the *Impact Assessment Act* (IAA) and Ontario's *Environmental Assessment Act*.

1.1 Project description

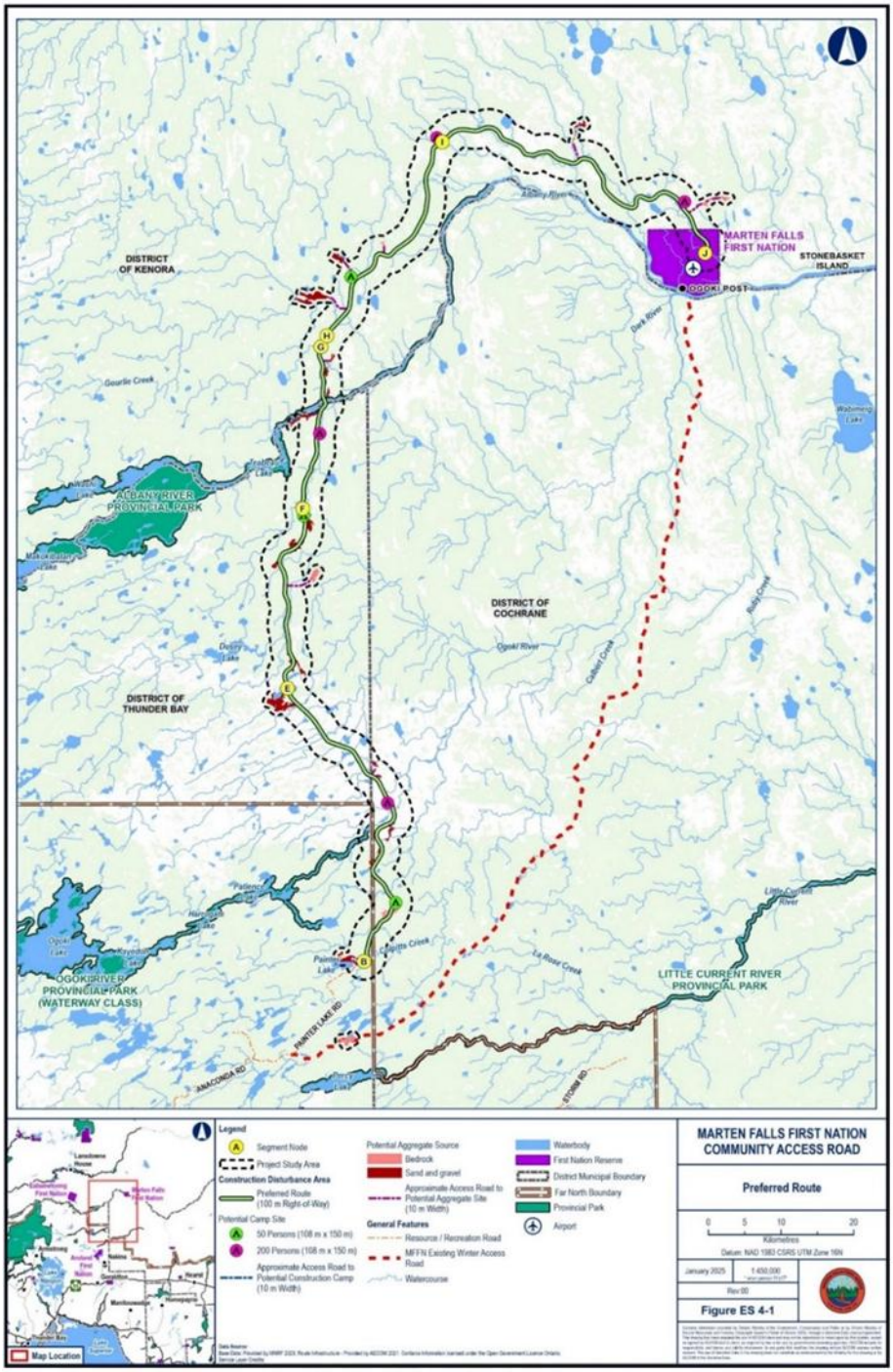
The proponent is proposing the construction and operation, including maintenance, of an all-season multi-use community access road approximately 184 kilometres in length, connecting the northern end of Painter Lake forestry road to the community of Marten Falls (Figure 1). Marten Falls is located at the junction of the Albany and Ogoki rivers, approximately 170 kilometres northeast of Nakina, Ontario. As proposed, the project could enable future access to potential mineral development activities in the Ring of Fire area.

The two-lane roadway would be approximately 12 to 13 metres wide, with a right-of-way approximately 100 metres wide, cleared to a width of 60 metres. Other project components would consist of associated works including temporary work areas and camps, road maintenance facilities and rest stops, temporary access roads, bridges, culverts, and quarries. The footprint of these project components is collectively referred as the Construction Disturbance Area (CDA).

Portions of the project are expected to pass through lowland and wetland ecosystems, including peatlands. In these areas, the proponent has indicated that the road will be built in a way that keeps the peat in place while allowing water to continue flowing naturally. This would include placing large rocks over the peat to create a stable road base with permeable embankment. This structure would be supported with reinforcing material such as heavy geogrid to help it settle without clogging to function properly. Where needed, culverts would also be used to maintain natural drainage patterns.

The construction phase of the project is expected to take between three and ten years, and the operation phase would continue indefinitely as the road would be permanent infrastructure.

Figure 1: Project location and key components



Source: Marten Falls Community Access Road Project, Environmental Assessment Report/Impact Statement, Figure ES 4-1

The road would establish a permanent connection between the Marten Falls First Nation community and the Ontario provincial highway network. The purpose of the project is to address ongoing challenges posed by the community's remote location, including reliance on costly air transportation and increasingly unreliable winter roads, which constrain access to essential goods, services, and economic opportunities.

The need for the project is demonstrated by its potential to improve community well-being through enhanced access to health, education, and social services; reduce the cost of living; and support economic reconciliation by enabling sustainable development and long-term growth.

Alternatives to carrying out the project considered by the proponent included air transportation, a railroad, and the existing winter access road that is dependent on ice thickness and open sometimes only for a few weeks a year. For most of the year, the community relies on costly air transportation, which also limits what can be transported. The winter road, being weather dependent, is unreliable and insufficient to meet the community needs. Railroad was considered by the proponent but deemed insufficient to meet the needs of the community as it would not offer the same level of freedom of movement as an all-season road.

1.2 Impact assessment process, scope and considerations

IAAC conducted an impact assessment of the project, coordinating with the Government of Ontario. The impact assessment commenced on February 24, 2020. IAAC issued Tailored Impact Statement Guidelines (TISG) to the proponent, which set out the scope of the assessment and described the information and studies required of the proponent. Following amendments to the IAA, IAAC issued a letter to the proponent on June 11, 2025, clarifying that the next steps in the Impact Statement phase of the project will focus on key issues relevant for decision making, specifically the adverse effects within federal jurisdiction and the positive benefits of the project, as well as on leveraging federal and provincial legislative frameworks outside the IAA to address the key issues.

In addition to being subject to an impact assessment under the IAA, the proponent entered into a voluntary agreement with the Ontario Ministry of the Environment, Conservation and Parks (MECP) to subject the project to a comprehensive environmental assessment under Ontario's *Environmental Assessment Act*. The provincial environmental assessment process started on October 8, 2021.

The proponent conducted studies and sought input from Indigenous communities, the public, federal authorities and provincial ministries, to address both federal and provincial requirements. IAAC and MECP coordinated, to the extent possible, the conduct of the

federal and provincial assessments to streamline efforts of all parties. This included coordination of technical reviews to support the proponent in preparing a single set of documentation with the required information and studies, called the Impact Statement in the federal impact assessment process. The Impact Statement was submitted by the proponent to IAAC on February 20, 2026.

IAAC then prepared this draft IA Report, which provides information about the impact assessment and sets out IAAC's rationale and conclusions. In preparing the draft IA Report, IAAC considered multiple sources of information including: the proponent's Impact Statement, Indigenous Knowledge provided and other input from Indigenous communities, comments and community knowledge from the public, and information or knowledge provided by federal authorities and provincial ministries.

1.2.1 Effects assessment

Based on information made available through the federal and provincial assessments, the project is likely to cause the following effects on the environment, and on health, social, and economic conditions:

- adverse effects on:
  - groundwater and surface water;
  - geology, geochemistry, topography and soils;
  - vegetation and wetlands;
  - wildlife and wildlife habitat, including species at risk listed on Schedule 1 of the *Species at Risk Act* (SARA), fish and fish habitat and migratory birds;
  - waterways navigation;
  - Indigenous Peoples' current use of lands and resources for traditional purposes,
  - archaeological and heritage resources;
  - visual landscape;
  - atmospheric environment, including air quality; and
- positive and adverse effects on health, social and economic conditions.

From among these effects, this report identifies and provides information on the adverse effects within federal jurisdiction and direct or incidental adverse effects from the project as defined in Section 2 of the IAA (collectively referred to in this report as "adverse federal effects"), as well as other effects that may inform decision making.

The adverse federal effects of the project are listed below and set out in Sections 2 and 4.3 of this document:

- Effects on fish and fish habitat;

- Effects on migratory birds;
- Effects on the environment on federal lands;
- Effects from physical activities carried out on federal lands;
- Effects on structures, sites or things of historical, archaeological, paleontological or architectural significance to Indigenous Peoples and effects to the physical and cultural heritage of Indigenous Peoples;
- Effects on current use of lands and resources for traditional purposes by Indigenous Peoples; and
- Effects on the health, social, and economic conditions of Indigenous Peoples.

Where effects could fall into more than one category of adverse federal effects, IAAC assessed them in a single category. For example, effects on fish and fish habitat are considered within its own section of the report and not duplicated in the assessment of effects from physical activities carried out on federal lands. The effects of the project on the environment on federal lands are included or similar to the effects of physical activities carried out on federal lands, which are assessed in Section 2.3. As applicable, the result of interactions between effects informed the analysis in the sections about adverse federal effects of this report.

The likely direct or incidental adverse effects associated with potential authorizations or permits under the *Canadian Navigable Waters Act*, *Fisheries Act*, SARA, and *Explosives Act* are included in, or similar to, the adverse federal effects on fish and fish habitat, migratory birds, and resulting from physical activities carried out on federal lands, as well as the adverse changes associated with effects on Indigenous Peoples, which are assessed in Sections 2.1, 2.2, and 2.3 and 4.3, respectively. No federal authority has provided financial assistance for the purpose of enabling the project to be carried out, in whole or in part.

In its assessment, IAAC considered likely effect pathways that could lead to adverse federal effects. This report focuses on adverse federal effects and effect pathways that are key issues.

In addition to adverse federal effects, IAAC considered other effects that could support decision making at the end of the impact assessment process. Specifically, this included information related to:

- the impacts that the likely effects of the project may have on any Indigenous group (positive and adverse) and adverse impacts on the rights of Indigenous Peoples;
- the extent to which the likely effects of the project contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change; and
- the extent to which the likely effects of the project contribute to sustainability.

1.2.2 Other factors considered in the impact assessment

In conducting the impact assessment, IAAC considered the factors described in section 22 of the IAA to the extent of their relevance to the impact assessment for this project. Annex B lists the section 22 factors and indicates where they are included in this IA Report. Additional information on some factors is provided below.

1.2.2.1 Malfunction and accident scenarios

IAAC considered the effects from malfunctions and accidents that may occur in connection with the project during the construction and operation phases including:

- Scenario 1: Accidental spills of hazardous material, including spills that may impact fish and fish habitat by reducing water quality;
- Scenario 2: Vehicle or equipment accidents, including vehicular collisions with migratory birds and wildlife of importance to traditional practices of Indigenous communities;
- Scenario 3: Structural failure of a project component (e.g., road surface failure, bridge failure, or culvert failure or a storage facility accident) due to extreme weather or wildfire event could result in adverse effects to fish and fish habitat, migratory birds, wildlife important to Indigenous traditional practices, and community well-being; and
- Scenario 4: Accidental fires and explosions associated with project components (e.g., equipment, fuel storage, maintenance activities, or camps) which could result in adverse effects to migratory birds, wildlife important to Indigenous traditional practices, and community well-being.

Of the scenarios identified, IAAC considers Scenarios 1 and 2 as likely to occur. These scenarios are plausible during the construction and operation of the project, based on the nature of the activities and the operating environment. Further, these scenarios are consistent with hazards identified as priorities by the Ontario Ministry of Emergency Preparedness and Response. The adverse federal effects of the likely malfunctions and accidents are included in Sections 2 and 4.3 of this report, as applicable. The adverse federal effects of unlikely malfunction and accident scenarios are considered in Section 3.

1.2.2.2 Effects to the project caused by the environment

IAAC considered potential effects caused by the environment to the project, such as severe natural events (e.g., extreme rainfall, drought, and seismic activity), including how these could be a contributing or complicating factor for malfunctions and accidents. The project has been designed to mitigate potential effects of the environment on the project with consideration of existing conditions and external environmental risks, including

projected climate trends. All proposed structures, foundations, and related facilities would follow applicable Canada and Ontario codes, guidelines, specifications, and standards, including the Ontario Ministry of Transportation Highway Drainage Design Standards (2008) and Maintenance Manual (2003). Adequate road drainage, and properly sized and maintained culverts will be designed, based on historical climate data and future climate scenarios, as well as the Canadian Highway Bridge Design Code (CSA S6:25, 2019), which would ensure that bridge components would withstand extreme environmental conditions. Environment and Climate Change Canada (ECCC) considers the proponent's climate change risk assessment conclusions on the risks that environmental hazards may have on the project and their mitigations to be reasonable.

Furthermore, the baseline conditions that informed the assessment included consideration of how environmental conditions could change due to climate change, where relevant.

1.2.2.3 Other projects considered in the cumulative effects assessment

IAAC considered how the likely residual adverse federal effects of the project could interact with effects from other past, present or likely future physical activities, resulting in cumulative effects. The other physical activities considered were:

- mining activities;
- mineral exploration activities;
- electricity generation and water diversion;
- telecommunications activities;
- road construction and operation projects; and
- forestry management activities.

As applicable, the cumulative effects of the project in combination with other physical activities are discussed in Sections 2 and 4.3 of this report.

1.2.2.4 Alternatives means of carrying out the project

IAAC considered the alternative means of carrying out the project identified by the proponent as technically and economically feasible, as well as the effects of those means. It also considered the rationale provided by the proponent for its preferred means of carrying out key project elements.

In accordance with provincial and federal requirements, the proponent considered multiple route alternatives. Two main route options were ultimately compared, with each route option including some sections that run parallel, overlap, and/or cross each other. Each route option also involves different potential water crossing locations. The two route options were further compared by dividing each into three separate segments, in order to

identify the preferred alternative for each segment. Following technical study, data collection, and consultation that integrated Indigenous Knowledge and feedback from Marten Falls First Nation community members, Chief and Council, and other Indigenous communities, as well as feedback from the public, the proponent identified a preferred route corridor. A preferred route was identified and formally endorsed by Band Council Resolution in August 2024. Means for other project components were then selected from feasible options within the preferred corridor.

1.2.2.5 Gender-based Analysis Plus

IAAC applied Gender-based Analysis Plus (GBA Plus) to inform its assessment of the project's potential adverse federal effects and its consideration of information that could inform federal decision making. As applicable, the differential effects of the project on diverse populations – considering intersecting identify factors – were identified and considered, including in Section 4.3 of this report.

1.2.3 Criteria for significance of likely adverse federal effects

Taking into consideration the recommended mitigation measures, IAAC assessed whether there are residual adverse federal effects of the project (i.e., adverse federal effects that are likely to remain after taking into account the implementation of recommended mitigation measures). Where there are residual effects, IAAC also assessed cumulative effects that are likely to result from the project in combination with other physical activities that have been or will be carried out.

IAAC described the residual adverse federal effects and cumulative effects using the rating criteria defined in Annex B. IAAC drew conclusions on whether those effects are likely to be significant, and, if so, characterized the extent to which effects are likely to be significant. Table 3 provides information about the criteria used to determine whether and to what extent adverse federal effects were likely to be significant.

Table 3: Categories used to characterize the extent to which the adverse federal effects are significant

Extent of significance	Description
Not significant	Effect is sufficiently small that it does not individually or cumulatively have a significant effect on a valued component, and generates no or few impacts in social or ecological contexts.
Low extent of significance	Effect is significant but low in magnitude, of short duration, infrequent, small in spatial extent, reversible or readily avoided, and generates minor impacts in social or ecological contexts. Mitigation measures may not be

Extent of significance	Description
	required, or would allow baseline conditions to remain largely unchanged such that a valued component is not likely to be diminished or lost.
Moderate extent of significance	Effect is significant and moderate in magnitude, of moderate duration, occasionally frequent, possibly/partially reversible, and generates a moderate level of impacts in social or ecological contexts. Mitigation measures may be required but not fully eliminate, reduce, control or offset the effect but should prevent severe diminishment or loss of a valued component.
High extent of significance	Effect is significant and high in magnitude, permanent/long term, frequent, irreversible, and over a large spatial extent or within an area of exclusive/preferred Indigenous use or of ecological/environmental sensitivity. High levels of impacts in social or ecological contexts are expected. There is a high degree of uncertainty of the effectiveness of mitigation measures, or mitigation measures are unable to fully address effects such that a valued component is likely to be severely diminished or lost.

1.3 Consultation and engagement with Indigenous groups

As set out in the Indigenous Engagement and Partnership Plan (IEPP), IAAC consulted and engaged with Indigenous communities. Section 4 describes the consultation process carried out over the course of the impact assessment and presents the perspectives of Indigenous communities regarding the process. It also provides information on the Indigenous Knowledge that was provided with respect to the project and was considered by IAAC in conducting the impact assessment and in preparing this report. Input from Indigenous communities informed IAAC's assessment and is incorporated throughout the IA Report.

1.4 Public engagement

Consistent with the Public Participation Plan, IAAC engaged the public during the impact assessment process and considered their input. Engagement included:

- virtual and in-person meetings; and

- opportunities to comment on the TISG, and IAAC's preliminary analysis of federal effects and benefits of the project.

IAAC provided $60 000 in participant funding to help the public participate in the impact assessment.

Written public comments received by IAAC were published on the project page on the Canadian Impact Assessment Registry, subject to privacy, security or confidentiality exceptions. Annex C provides a summary of public comments. Input from the public informed IAAC's assessment and is incorporated throughout the IA Report, as applicable.

2 Biophysical adverse federal effects

This section summarizes IAAC's rationale and conclusions related to the assessment of the biophysical adverse federal effects likely to be caused by the carrying out of the project.

2.1 Fish and fish habitat

The project is likely to cause residual and cumulative adverse effects on fish and fish habitat through degradation and loss of habitat, harm to fish populations, and increased recreational fishing. With the implementation of the recommended mitigation measures identified in Section 2.1.4, IAAC is of the view that the residual effects of the project on fish and fish habitat are likely to be significant to a low extent as local habitat loss may not be fully offset. The cumulative effects of the project in combination with other physical activities are likely to be significant to a low extent as the spatial and temporal overlap with effects from other proposed projects would be small.

IAAC assessed effects on fish and fish habitat including through degradation and loss of habitat, harm to fish populations, and decrease in fish population through recreational fishing.

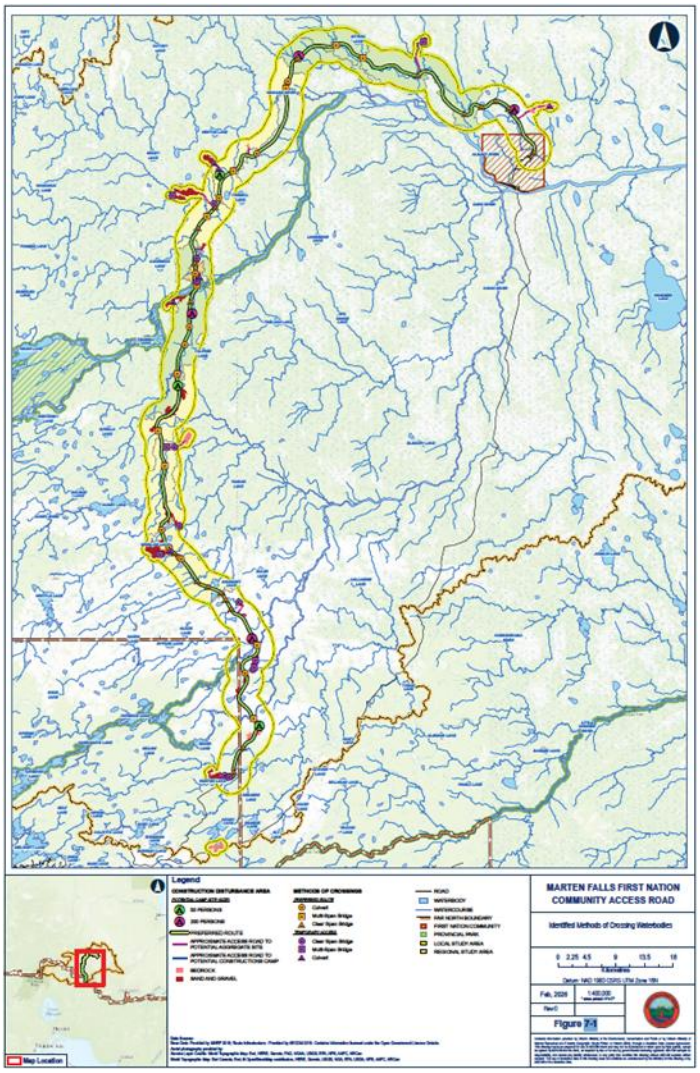
The environment, including fish and fish habitat, surrounding the road is generally seen as pristine by Indigenous communities. The proponent indicated that the watercourses and waterbodies crossed by the proposed route contain fish habitat for 37 fish species. Considering the information provided by the proponent, IAAC assessed effects to all fish species, and focused the assessment of effects to the six fish species that were noted as

important to Indigenous communities, which includes species at risk, identified in lakes and rivers within the study areas: lake sturgeon (a species of Special Concern under SARA), walleye, brook trout, northern pike, lake whitefish, and burbot. The proposed route includes water crossings at areas where potential spawning, rearing, and/or overwintering habitat for these species could be present.

Climate change is expected to affect the project over time through warmer temperatures and more frequent extreme precipitation and runoff events. These conditions may alter hydrology (e.g., water levels and flows) and increase erosion and sediment transport during high-runoff periods, as well as increasing water temperature. These changes to the environment could increase the likelihood or magnitude of effects on fish and fish habitat, including effects associated with how project components (e.g., water crossings and culverts) interact with fish and fish habitat. The proponent has indicated that the design of water crossing structures considered climate change effects.

IAAC considered effects on fish and fish habitat within the Local Study Area (LSA) as well as the Regional Study Area (RSA). The LSA extends 2.5 kilometres from the centreline on both sides of the proposed route plus a 500-metre buffer around each of the other project components. The RSA extends beyond the LSA and encompasses the area of the tertiary watersheds crossed by the proposed route. The proposed route is within the Southwestern Hudson Bay watershed and passes through three tertiary watersheds: the Upper Albany-Makokibatan, Lower Ogoki, and Upper Albany-Muswabik. The LSA and RSA contain abundant waterbodies, as depicted in Figure 2, and a variety of fish habitat features, including flats, runs, riffles, pools, and impoundments, which provide potential areas for spawning, rearing, and overwintering for a variety of fish species. Notably, many Indigenous communities identified the Albany River, and tributaries, as particularly significant, highlighting their importance as fish habitat for species of importance. IAAC considered effects during project construction and operation; decommissioning and abandonment of the road are not anticipated.

Figure 2: Local and regional study areas for fish and fish habitat



Source: Marten Falls Community Access Road Project, Environmental Assessment/Impact Statement, Appendix F Figure 7-1

2.1.1 Assessment of effects

2.1.1.1 Degradation and loss of fish habitat

The project would result in the loss and physical degradation of 8.3 hectares of fish habitat, including resulting from the placement of water crossing structures along the proposed route, and an additional 4.4 hectares resulting from the placement of water crossing structures along temporary access roads. A variety of water crossing structures

may be used including clear span bridges, culverts, ice bridges/snow fills, and rig mats. Potential spawning and/or rearing habitat for all six species of importance (lake sturgeon, walleye, brook trout, northern pike, lake whitefish, and burbot) would be degraded or lost from construction, including 2.6 hectares of habitat for lake sturgeon along the proposed route. Effects on fish habitat may result from in-water or near water works, including operating heavy machinery; installing isolation structures; bank treatments and site preparation, including clearing of aquatic and riparian vegetation; and placing structures, fill and other materials in the waterbody. The proponent would avoid channel realignment or infilling; however, where avoidance is not possible, IAAC is of the view/understands that the mitigation measures proposed by the proponent to address adverse changes in water quality, hydrology and fish passage would be appropriate.

IAAC notes that Animbiigoo Zaagi'igan Anishinaabek, Aroland First Nation, Marten Falls First Nation and Weenusk First Nation have expressed concerns about loss of spawning habitat. To mitigate the physical degradation or loss of fish habitat, the proponent selected a route that would minimize the number of water crossings, avoid sensitive habitats, and reduce the CDA. Also, the proponent committed to follow best practices, where possible, including by using isolation methods that maintain downstream flows; avoiding work during restricted activity timing windows; and minimizing vegetation removal to the requirement of the access road and alignment clearing width. Temporary crossings would include the same mitigation measures with the addition of DFO's code of practice Ice bridges and snow fills: Construction, maintenance and decommissioning, where appropriate. Further, IAAC understands that authorizations under the *Fisheries Act* and, for activities occurring on provincial Crown land, permits under Ontario's *Public Lands Act* and *Lakes and Rivers Improvement Act* may be required to carry out the project. These legislative mechanisms would manage effects on fish habitat associated with the project that cannot be avoided though project design by requiring offsetting where residual effects to fish and fish habitat remain (*Fisheries Act*) and may include implementation of proposed avoidance and mitigation measures, monitoring and reporting requirements, contingency measures as well as the identification of further site-specific measures during the permitting stage (*Public Lands Act* and *Lakes and Rivers Improvement Act*).

DFO noted that, because the local environment is largely undisturbed and ecologically intact, there may be challenges in finding suitable locations within the same reach or watershed to offset degradation or loss of fish habitat, potentially making offsetting difficult. If suitable offsetting locations cannot be found, a combination of different types of offsetting measures, including complementary measures like data collection, scientific research, and public education activities could be used to offset effects to fish habitat and meet DFO requirements. IAAC and DFO agree that the proponent should consult with Indigenous communities and provincial ministries with knowledge of the area to inform offsetting plans.

Effects from the project on fish habitat from changes to hydrology may occur as a result of the floating road design and project activities, including: the installation of water crossings, and in-water works for dewatering, water taking and discharging activities related to aggregate sites, worker camps, and other project components during construction and operation. Additionally, land-based construction activities, including aggregate placement, peat compression, and the installation of mineral and/or geotextile layers, may alter hydrology, especially in the peatland. Aroland First Nation and Fort Albany First Nation expressed concerns about impacts on fish and fish habitat from hydrological changes.

To minimize changes in hydrology (e.g., changes in water flows, levels and velocities), the proponent committed to design, install and maintain bridges and culverts to sustain downstream flows and fish passage in accordance with applicable standards and guidelines, including Environmental Guidelines for Access Roads and Water Crossings from the Ontario Ministry of Natural Resources (MNR), and DFO's Measures to Protect Fish and Fish Habitat, Code of Practice: Culvert Maintenance, and Standard: In-water site isolation. The proponent has also committed to maintaining hydrological flows through the peatlands by installing equalization culverts and the floating road design. The *Fisheries Act* and its regulations address potential changes in hydrology that would result in adverse effects to fish habitat, including through habitat protection and pollution prevention provisions which prohibit activities that would result in the harmful alteration, disruption, or destruction of fish habitat, the application of protective provisions as required through a *Fisheries Act* authorization, and following relevant DFO codes of practice where appropriate. Provincial requirements to address potential adverse effects to hydrology include, where applicable, the permitting of water crossings and approvals for temporary dewatering activities under Ontario's *Lakes and Rivers Improvement Act*; requirements for water taking, drainage, discharge, and treatment of wastewater and aggregate processing water in the Permit to Take Water and Environmental Compliance Approval issued under the *Ontario Water Resources Act* or the Environmental Activity and Sector Registry under Ontario's *Environmental Protection Act*; and other operating requirements included in site permits issued under Ontario's *Aggregate Resources Act* (ARA).

IAAC is of the view that, with the implementation of these mitigation measures, the project is expected to cause limited residual effects from the degradation and loss of fish habitat, despite the uncertainty on the types and locations of offsetting and/or compensatory measures that would be found to be suitable through DFO requirements.

2.1.1.2 Harm to fish populations

The project may result in harm to fish populations through in-water work (e.g., operating heavy machinery, placing fill or structures, and dewatering). To mitigate physical injury to fish, the proponent has committed to rescue fish within the isolated in-water work area and relocate them outside of the zone of impact. Mitigation measures would likely be a part of an authorization under the *Fisheries Act* as well as following DFO's Standards: In-water

site isolation, Fish Capture and Relocation, Water intake end-of-pipe fish screens. Fish rescue would be conducted in accordance with a License to Collect Fish for Scientific Purposes issued under Ontario's *Fish Licensing Regulation*. In-water or near water works may also include blasting which can result in physical injury to fish but is not planned to be used in water for the project. If blasting is required in or near water frequented by fish during construction or maintenance work, the proponent has committed to following the Ontario Provincial Standard Specification General Specifications for the Use of Explosives, DFO's Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters, and adhering to the protective provisions under the *Fisheries Act* to minimize risk of physical injury to fish from blasting. Further, IAAC understands that, under the Aggregate Resources Act (ARA), aggregate permit applications are required to include site plans and technical reports prepared in accordance with the Aggregate Resources of Ontario Site Plan (2020) and Technical Reports and Information (2023) Standards. This includes preparing a Natural Environment Report to determine if fish habitat is present within 120 metres of the site. Where potential impacts on these features are identified, the Natural Environment Report must outline proposed preventative, mitigation, or remedial measures. This may include recommendations to implement DFO's guidelines to mitigate any potential negative impacts to fish related to blasting, to be incorporated on the site plan.

Project activities may also result in harm to fish populations by changing water quality through aggregate placement, shoreline and in-water work (such as vegetation clearing), as well as water and wastewater discharges and site run-off. Placement of aggregate materials with a high potential for acid rock drainage (ARD) or metal leaching (ML) may result in changes to water quality and impact fish habitat, as was identified by Aroland First Nation. The proponent committed to undertake further testing of aggregate material (i.e., ARD/ML potential) prior to project construction to avoid developing sites that show potential for ARD/ML. Additionally, the pollution prevention provisions of the *Fisheries Act* prohibit the release of deleterious substances into water frequented by fish.

Aroland First Nation, Ginoogaming First Nation, Marten Falls First Nation, Nibinamik First Nation, and Weenusk First Nation expressed concerns about impacts to fish from changes to water quality that result from sedimentation and vegetation clearing. To mitigate this effect, the proponent has committed to develop and implement an erosion and sediment control plan and to follow best management practices (e.g., using multistage drainage and sediment controls to collect and treat stormwater runoff including collection ditches, silt fences and sediment traps/basins), DFO standard: Planning for land-based erosion and sediment control, and provincial standards (e.g., Ontario Provincial Standard Specifications Construction Specification for Temporary Erosion Control). Where applicable, authorizations issued under the *Fisheries Act*, and permits issued under Ontario's *Public Lands Act* and Ontario's *Lakes and Rivers Improvements Act* may include erosion and sediment control measures including restrictions on bank grading, and design requirements for water crossings to avoid and mitigate effects to fish and fish habitat.

Nibinamik First Nation expressed concern related to changes to water quality from discharges of water and wastewater, and from site run-off from aggregate sites, worker camps, and laydown and field office areas. The proponent proposed to discharge domestic wastewater onsite (e.g., leaching beds) or haul to a wastewater treatment plant for disposal. Changes to water quality would be managed in accordance with requirements under the *Ontario Water Resources Act* through an Environmental Compliance Approval for wastewater systems, site drainage water and stormwater management systems, as well as aggregate processing water. The proponent also committed to locating facilities (e.g. camps and laydown areas) a minimum of 30 metres from waterbodies and to review discharge locations to avoid discharging into sensitive areas, including areas identified the Indigenous Knowledge Program.

The proponent committed to conduct water quality monitoring for total suspended sediments and turbidity when in-water work would occur in or near fish and fish habitat. Water quality monitoring for turbidity would be required as part of an authorization under the *Fisheries Act*, and may also be required as part of a permit or approval under Ontario's *Public Lands Act*, Ontario's *Lakes and Rivers Improvements Act*, Ontario's *Water Resources Act*, and Ontario's *Environmental Protection Act*. For the purpose of setting water quality guidelines for permits and approvals for protection of aquatic life, IAAC understands that DFO and Ontario would consider appropriate water quality benchmarks such as Provincial Water Quality Objectives, Canadian Water Quality Guidelines for the Protection of Aquatic Life, and Federal Water Quality Guidelines.

Accidental spills during storage, transportation, handling and dispensing of hazardous materials, from vehicle accidents or mechanical malfunctions during the construction and operation phases may occur and could also harm fish populations. Although spills are infrequent, short-term localized spills are likely to occur over the lifespan of the project. Constance Lake First Nation, Kashechewan First Nation, Marten Falls First Nation, and Nibinamik First Nation expressed concerns about impacts to fish from changes to water quality resulting from accidents and spills. Spills of harmful materials (e.g., petroleum products, sewage, ammonium nitrate) into or near waterbodies may degrade, or even destroy, fish habitat and injure fish through direct acute or chronic toxicity from contamination.

The proponent committed to prepare and implement a Spill Prevention and Emergency Response Plan in accordance with all applicable federal and provincial standards and legislation, such as DFO's Measures to protect fish and fish habitat. Additionally, it would be included as part of an authorization issued under the *Fisheries Act*. The plan would include preventative measures to reduce the likelihood of, or impact from, accidental spills, such as refueling away from waterbodies, where possible; providing spill response kits and equipment at dedicated petroleum storage areas; and training personnel in best practices for spill response and the transportation of dangerous goods. The proponent would also have to comply with legislative mechanisms, such as Ontario's *Technical*

Standards and Safety Act, 2000 and *Dangerous Goods Transportation Act* as well as the federal *Transportation of Dangerous Goods Act* and *Explosives Act*.

In the event of a spill, the proponent committed to implement corrective actions that could reduce effects to fish and fish habitat, such as containing and cleaning up spills as soon as possible. IAAC understands that, under Ontario's *Environmental Protection Act*, it is the duty of the owner or controller of a spilled pollutant to clean up a spill and do whatever is practicable to prevent and eliminate adverse effects from a spill. Spills of any harmful material must be reported to the Spills Action Centre of MECP.

IAAC is of the view that, with the implementation of these mitigation measures, the project is expected to cause limited to no residual effects through harm to fish populations, given that potential effects would be infrequent (e.g. during construction, accidental spills) and be confined to small areas (e.g. near in-water work and aggregate pits blast sites).

2.1.1.3 Increased recreational fishing

Increased accessibility during construction and operation may lead to greater recreational fishing activity in nearby waterbodies over the life of the project, which could result in localized declines in fish populations. Animbiigoo Zaagi'igan Anishinaabek, Aroland First Nation, Attawapiskat First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, and Marten Falls First Nation expressed concern that there would be less fish available from increased angling in more easily accessible fishing areas.

To reduce potential recreational fishing, the proponent has committed to decommissioning and reclaiming temporary infrastructure including temporary access roads at the end of construction. Further, recreational fisheries in Ontario are managed through Ontario's *Fish and Wildlife Conservation Act* to protect fish populations and their habitats, notably by regulating recreational fishing.

IAAC is of the view that, with the implementation of the mitigation measures, the project is expected to cause limited to no residual effects on fish populations due to increased recreational fishing, depending on how many recreational anglers visit the area.

2.1.2 Residual effects

Based on the above assessment, IAAC is of the view that the project would likely result in residual adverse effects on fish and fish habitat, primarily through degradation and loss of habitat.

The residual effects, taking into account the mitigation measures described above, would be low in magnitude and geographic extent as there would be a net loss and degradation of fish habitat, including spawning habitat, as well as hydrological changes localized to the

CDA, but the changes are not expected to affect fish populations. The effects would occur infrequently, primarily during project construction (except for effects from recreational fishing) and, if applicable, would be at least partially reversed through habitat offsetting required by *Fisheries Act* authorizations, which may not be local given the pristine conditions nearby and/or rely on complementary measures. DFO noted that the potential effects from the installation of waterbody crossings associated with the proposed project are well understood.

IAAC concludes that the residual adverse effects of the project on fish and fish habitat are likely to be significant to a low extent.

2.1.3 Cumulative effects

The residual adverse effects of the project on fish and fish habitat, in combination with the effects of other past, present, and reasonably foreseeable projects, are likely to result in cumulative effects that are significant to a low extent. IAAC considered the Albany River basin as the spatial boundary for the cumulative effects assessment because it encompasses the catchment area of the Albany River and Ogoki River and their tributaries, which are hydrologically connected to the fish populations and habitat that may be affected by the project. This spatial boundary captures the area where downstream effects to fish and fish habitat could occur from other projects, including operating and proposed mines, mineral exploration activities, water diversions, other roads, and the Rapid Lynx Broadband Project (a fibre-optic internet cable network). These projects would cause changes to the environment, notably degradation or removal of fish habitat, in basin areas upstream and downstream.

Federal (i.e., *Fisheries Act*) and provincial (e.g., *Lakes and Rivers Improvement Act*, *Ontario Water Resources Act*) protections for fish and fish habitat would apply to limit the effects of these projects on fish and fish habitat to project-specific areas. The project would have some geographic overlap with three of the other projects: Northern Road Link, Anaconda-Painter Lake Road, and Rapid Lynx Broadband. However, the effects from these projects are not expected to reduce fish population levels within the river basin.

In addition, residual effects from the project in combination with the other projects would mainly occur during project construction (except for effects from recreational fishing). As such, temporal overlap in residual effects between the proposed project and other projects would be limited.

Given that the interaction of the residual effect from the project with residual effects from other projects would be limited, IAAC does not recommend additional mitigation measures or a follow-up program related to cumulative effects.

Taking into consideration the recommended mitigation measures in Section 2.1.4 below, the likely cumulative effects to fish and fish habitat would be low in magnitude and

geographic extent given that effects would be largely localized to the respective CDA, which is small relative to the area of fish habitat within the Albany River basin. In addition, the effects would be relatively short-term, occurring primarily during the construction phase and partially reversible over the long-term. For the types of projects considered, the effects are generally well understood and addressed with standard mitigation measures.

IAAC concludes that cumulative effects of the project on fish and fish habitat are likely to be significant to a low extent as the project, along with other projects, would contribute to habitat loss and degradation in a pristine region.

2.1.4 IAAC's recommended mitigation measures and follow-up program for implementation by the proponent pertaining to fish and fish habitat

Recommended mitigation measures that would potentially be ensured by DFO
As part of the fish and fish habitat protection provisions under the *Fisheries Act:* • implement measures to avoid or mitigate the death of fish; the harmful alteration, disruption or destruction of fish habitat; the deposit or entrance of a deleterious substance in water frequented by fish including; and, where applicable, develop, to the satisfaction of DFO and in consultation with Indigenous communities, and implement offsetting plan(s) taking into account DFO's Policy for Applying Measures to Offset Harmful Impacts to Fish and Fish Habitat.
Recommended mitigation measures that would potentially be ensured by the Government of Ontario
With respect to changes in hydrology and fish passage, as part of the permits and approvals that may be issued under Ontario's *Public Lands Act* and Ontario's *Lakes and Rivers Improvement Act*: • design, install, and maintain water crossings in a manner that addresses downstream flows, water levels, velocities, and fish passage, as appropriate to site conditions and as determined through applicable provincial review, permitting, and approval processes, including relevant standards, best practices, and permit conditions (e.g., MNR's Environmental Guidelines for Access Roads and Water Crossings, and DFO's Measures to Protect Fish and Fish Habitat and Code of Practice: Culvert Maintenance).
With respect to physical degradation of fish habitat, as part of permits and approvals that may be issued under Ontario's *Public Lands Act*: • avoid construction below the high-water mark during a fish restricted activity timing window as determined through the applicable permitting and review process, using all information available and a precautionary approach where uncertainty remains

regarding fish community composition, and considering relevant provincial guidance and the In-water Work Timing Window Guidelines.
With respect to physical injury to fish, as part of a license issued under Ontario's *Fish and Wildlife Conservation Act*: • rescue fish within the work area and relocate them away from the work area prior to starting any in-water work, where warranted by the nature of the work, in accordance with a License to Collect Fish for Scientific Purposes issued under the Fish Licensing Regulation.
With respect to changes in hydrology and water quality, as part of permits and approvals that may be issued under the Ontario Water Resources Act, and Ontario's Environmental Protection Act: • conduct dewatering, water-taking and wastewater discharge in accordance with permits and approvals issued under the Ontario Water Resources Act, and Ontario's Environmental Protection Act.
Implement, at a minimum, the following mitigation measures to control sedimentation, runoff and erosion, as appropriate, during all phases of the project in order to meet suspended sediments and turbidity thresholds in the Canadian Council of Ministers of the Environment's Canadian Water Quality Guidelines for the Protection of Aquatic Life or Provincial Water Quality Objectives: • stabilize all erodible areas (including excavated materials) and regularly inspect and maintain the stability of these areas until they are permanently stable; • install a settling basin for water being pumped or diverted from aggregate sites such that water run-off meets Canadian Water Quality Guidelines for the Protection of Aquatic Life or Provincial Water Quality Objectives before discharge into the receiving environment; • limit vegetation removal to the footprint of water crossing structures and maintain an undisturbed vegetated buffer zone of 30 metres upstream and downstream of each crossing; and • isolate in-water project activities from the receiving fish bearing waters to mitigate intensity, spatial scale and duration of sedimentation in fish habitat taking into account DFO's Interim standard: in-water site isolation.
Use only rock materials characterized as not acid-generating, non-potentially acid-generating and non-metal-leaching for project works.
Restrict vehicle and equipment refueling and servicing to a minimum of 30 metres from waterbodies such that they cannot result in accidental spills reaching fish-bearing waters.
Establish and implement a Spill Prevention plan and Emergency Response Management Plan to prevent and address accidents and malfunctions that may result in

adverse federal effects that includes, at a minimum, training personnel in spill response procedures, providing spill response kits and equipment for containing spills at work locations and in vehicles, and cleaning up and containing spills as soon as possible following incidents.
Recommended follow-up program that would be potentially included as conditions in the impact assessment decision statement
Implement a follow-up program, in consultation with Marten Falls First Nation with respect to waterbodies located on Marten Falls First Nation reserve land, and in consultation with Indigenous communities, DFO, ECCC, and MNR with respect to waterbodies located on non-federal lands within the LSA, to verify the accuracy of the impact assessment and determine the effectiveness of mitigation measures with respect to effects to fish and fish habitat from changes in water quality. The program should include: • monitoring water quality parameters in groundwater and surface water (total suspended solids, acidity (pH), electrical conductivity, ammonia, sulphates, nitrates, dissolved organic carbon, methylmercury, and heavy metals and metalloids, including aluminum, total mercury, arsenic, copper, iron, lead, manganese, nickel, and zinc) in waters frequented by fish starting during construction and until a three-year trend analysis indicates that the project may not change water quality; • comparing the monitoring results to the Canadian Council of Ministers of the Environment's Canadian Water Quality Guidelines for the Protection of Aquatic Life to determine whether modified or additional measures are required; • consideration of views from Indigenous communities on the design of the monitoring program and on the trend analysis; and • making the monitoring results available to Indigenous communities, as soon as feasible.

2.2 Effects on Migratory birds

The project is likely to cause limited residual and cumulative adverse effects on migratory birds through displacement due to vegetation clearing, sensory disturbances, and mortality risk due to potential accidental collisions and spills. With the implementation of the recommended mitigation measures identified in Section 2.2.4, IAAC is of the view that the residual adverse effects of the project on migratory birds are not likely to be significant as they would be limited to the CDA and occur infrequently. The cumulative effects of the project in combination with

other physical activities are not likely to be significant as the spatial and temporal overlap with effects from other proposed projects would be minimal.

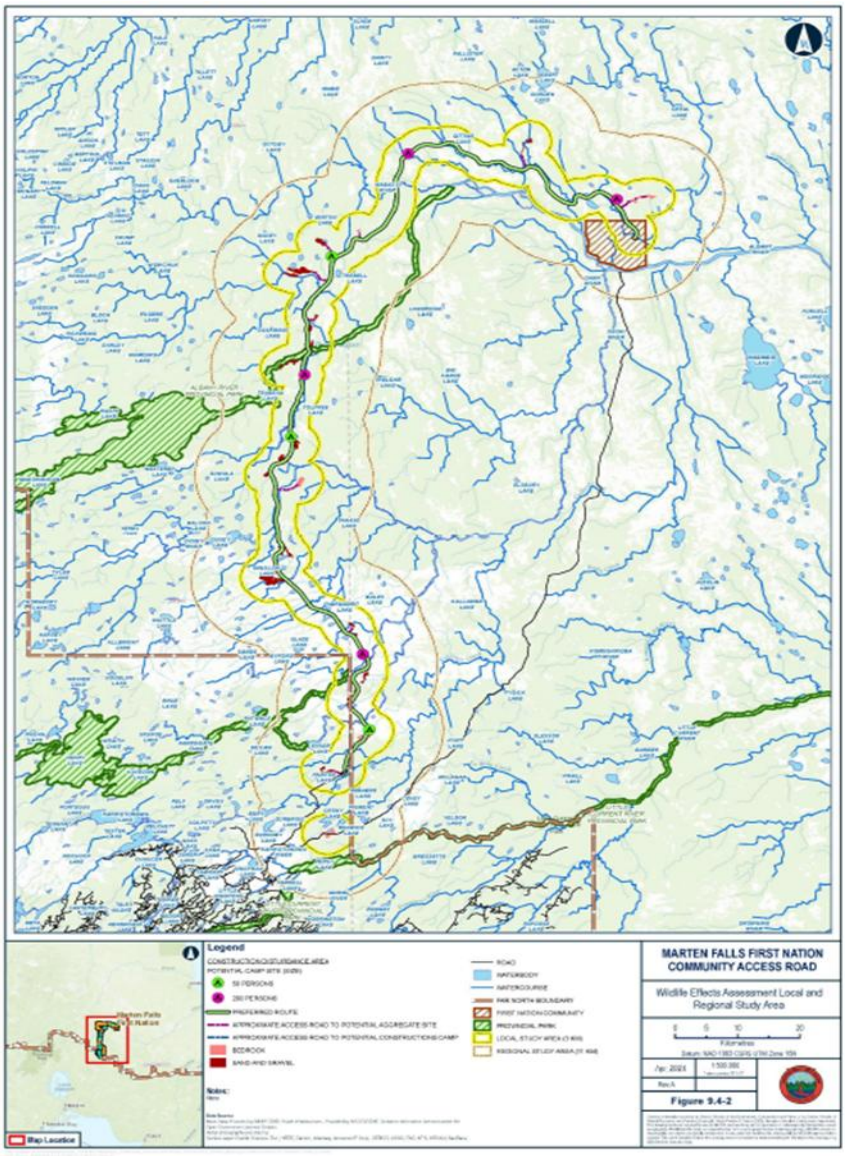
IAAC assessed effects on migratory birds including through displacement due to vegetation clearing, sensory disturbances during construction and maintenance activities, and mortality risk due to potential accidental collisions and spills.

The project would overlap with wetland and upland vegetation communities, which act as primary habitat for migratory birds. Migratory birds are known to occur within these vegetation communities in the area, which provide habitat for nesting, stopover, staging and migration.

IAAC considered effects to migratory birds within the LSA as well as the RSA. The LSA includes the CDA and extends three kilometres from the centreline on both sides of the proposed route. The RSA includes the LSA and further extends eight kilometres beyond the LSA boundary, as depicted in Figure 2. Effects were considered for both the construction and operation phases of the project.

The LSA and the RSA predominantly contain wetland habitats—bogs, fens, swamps, marshes, and open water — with upland coniferous, deciduous and mixed forests, as well as riparian areas also present across the landscape. These habitats support wetland songbirds (e.g., palm warbler and alder flycatcher), shorebirds (e.g., greater yellowlegs), waterfowl (e.g., Canada goose and mallard), and forest birds (e.g., orange-crowned warbler and Tennessee warbler), during the nesting season and during spring and fall migration periods.

Figure 3: Local and regional study areas for migratory birds



Source: Marten Falls First Nation Community Access Road Project, Environmental Assessment Report/Impact Statement, Figure 9.4-2

Climate change is expected to affect migratory birds and their habitat over time through warmer temperatures, shifting seasonal patterns, and more frequent extreme weather events. These changes may alter the timing of migration, breeding, and nesting, as well as the availability and quality of habitat along migratory routes and within the project area. These climate-related changes could increase the likelihood or magnitude of effects on

migratory birds by altering how project components interact with migratory bird habitat during sensitive periods.

Migratory birds use a variety of habitat types within the LSA and RSA for breeding, foraging, and migration. Forest birds are commonly associated with upland and mixed forest habitats, but may also occur in treed wetlands and other forested areas. Shorebirds typically forage and nest in shoreline and other wetland habitats around waterbodies, watercourses and riparian areas widespread across the LSA and RSA. Waterfowl use open waterbodies and surrounding wetlands, including conifer swamps, sparse treed bogs and fens, and thicket swamps, within the LSA and RSA for breeding and for spring and fall migration staging. Wetland birds nest and forage in bog, fen, swamp or marsh habitats as well as other wetland and riparian areas during the summer nesting season as well as spring and fall migration periods.

Forest bird species at risk listed under Schedule 1 of the SARA, expected to be present within the LSA and RSA, include Canada warbler, evening grosbeak, eastern whip-poor-will, eastern wood-pewee, olive-sided flycatcher, wood thrush, and yellow rail. Common nighthawk, a species listed as Special Concern under SARA and associated with open or disturbed habitats, was detected within the CDA and LSA through acoustic monitoring conducted by the proponent.

2.2.1 Assessment of effects

2.2.1.1 Displacement of migratory birds

The project would result in the displacement of migratory birds due to loss of suitable migratory bird habitat through vegetation clearing during construction and maintenance activities. While some habitat types could experience higher proportional losses within the LSA, most affected habitat types are regionally abundant. No habitat within the CDA was identified as unique or critical to the survival of migratory birds, including federally listed migratory bird species at risk. Attawapiskat First Nation, Kashechewan First Nation, Neskantaga First Nation and Weenusk First Nation expressed concerns about the effects from the project on migratory birds and bird habitat, including changes to bird populations, migration patterns and changes in availability of birds used for traditional practices.

To reduce displacement of migratory birds due to habitat loss, the proponent committed to minimize the extent of vegetation clearing during construction. Temporary work areas that are no longer required would be decommissioned and reclaimed, and areas disturbed during construction are expected to revegetate naturally over time. Progressive revegetation of areas not actively used for construction would be implemented where feasible, using native seed or appropriate tree species.

IAAC is of the view that, with the implementation of these mitigation measures, the project is expected to result in residual adverse effects on migratory birds due to displacement limited to the CDA (e.g., cleared areas within the right-of-way, aggregate sites) and generally limited to specific times (e.g., construction) and no residual effects on bird populations.

2.2.1.2 Sensory disturbance to migratory birds

Sensory disturbances (e.g., noise, light, and vibrations) due to project activities during construction and operations, such as blasting, use of construction equipment, lighting, and vehicle operations may alter migratory birds' behaviour, leading to local displacement and/or nest abandonment within the LSA. During construction and operations, noise levels are expected to increase within and adjacent to the CDA, and may extend into the LSA.

To reduce sensory disturbances to migratory birds, the proponent committed to setting buffer distances around active nests identified during surveys, as required in accordance with ECCC's Guidelines to Avoid Harm to Migratory Birds, minimize construction vehicles and equipment idling unless required by weather and/or safety conditions, use appropriate noise control measures, such as mufflers, acoustic linings, acoustic shields or acoustic sheds.

IAAC is of the view that, with the implementation of these mitigation measures, the project is expected to result in residual adverse effects on migratory birds due to sensory disturbances from noise that would be limited to the CDA and parts of LSA mainly during construction periods and there would be no residual effects on bird populations.

2.2.1.3 Mortality risk

Vegetation clearing during construction and maintenance activities within the CDA could destroy nests containing eggs or juveniles. To mitigate this, the proponent committed to conducting vegetation clearing in accordance with the *Migratory Birds Regulations, 2022* and other guidance outlined in ECCC's Guidelines to Avoid Harm to Migratory Birds. IAAC further notes that the provisions of the *Migratory Birds Convention Act, 1994* and *Migratory Birds Regulations, 2022* to protect migratory birds, their nests and eggs would apply to protect migratory birds, their nest and eggs.

Project construction and maintenance activities may create open or disturbed habitat features within the CDA that could be used by common nighthawk which is a species at risk listed under Schedule 1 of SARA. Suitable habitat for bank swallow, a federally listed species under SARA, was not identified within the LSA. However, due to bank swallow's habitat preferences, including nesting in vertical sandy or silty substrates, the construction of the project may create suitable nesting habitat within the CDA, such as temporary sand or aggregate stockpiles, pits or quarries. Vehicular or equipment collisions with migratory

birds that use the disturbed areas created by the project, would result in harm or death. IAAC recommends that the proponent follow guidance from ECCC related to the management of pits, quarries, and aggregate stockpiles to prevent or manage potential bank swallow nesting outlined in Bank Swallow (Riparia riparia): in sandpits and quarries. Additionally, IAAC recommends that the proponent monitor potential nesting and roosting areas for migratory bird species that are known to prefer disturbed areas, such as the common nighthawk, barn swallow and bank swallow, at times when these birds may be present in the CDA. If the birds or their nests are detected, the proponent should implement measures to decrease the likelihood of harm or death of individual birds, nests, and eggs. IAAC also notes that standard measures such as erecting road signs to lower vehicle speeds during the migratory bird nesting season and avoiding construction and maintenance activities during the migratory bird nesting season would limit collisions.

Given that much of the road crosses peatland and wetland environment, accidental spills could release harmful materials into surrounding wetlands and peatlands and cause harm or death to migratory birds. Mitigation measures described in Section 2.1.4, including those related to spill prevention and response, would support the management of potential adverse effects on migratory birds through control or containment of effects on aquatic and riparian environments where migratory birds could be present, resulting in infrequent effects confined to small areas. Effects from accidental spills are not likely in the portions of the road located in upland areas where swales and ditches within the right of way would capture spills and minimize the likelihood that any spills reach shorelines and waterbodies at a magnitude that could pose risk to migratory birds.

IAAC is of the view that, with the implementation of these mitigation measures, the project is expected to result in residual adverse effects on migratory birds due to mortality risk limited to the CDA (e.g., cleared areas within the right-of-way, aggregate sites) and generally limited to specific times (e.g., migratory bird nesting season, infrequent accidental spill), and no residual effects on bird populations.

2.2.2 Residual effects

Based on the above assessment, IAAC is of the view that the project would likely result in limited residual adverse effects on migratory birds from vegetation and land clearing, sensory disturbance and accidental collisions and spills.

The residual effects, taking into account the mitigation measures described above, would be low in magnitude and geographic extent as migratory birds would be displaced locally in the CDA into the LSA. The effects would occur infrequently (i.e., during land and vegetation clearing activities, and any collisions or spills where migratory birds are present) both during project construction and maintenance activities and would be irreversible. Changes at the population level are not anticipated, and there is low level of

uncertainty given that likely effects from the project and appropriate mitigation measures are well understood.

IAAC concludes that the residual adverse effects of the project on migratory birds are not likely to be significant.

2.2.3 Cumulative effects

The residual adverse effects of the project on migratory birds, in combination with other past, present, and reasonably foreseeable projects, are likely to have cumulative effects. For its assessment of cumulative effects, IAAC used the proponent's Caribou RSA in order to encompass an area large enough to consider the effects on migratory birds from other reasonably foreseeable projects and physical activities beyond the migratory birds RSA defined by the proponent. This larger area encompasses upland habitat, wetlands and habitat near waterbodies likely to be suitable for migratory birds. IAAC included projects that could cause harm or death to migratory birds, mostly through vegetation clearing and habitat loss, such as operating and proposed mines, mineral exploration activities, other roads, Ogoki Forest Management Plan, and the Rapid Lynx Broadband Project. Effects from these other projects on migratory birds are likely to be additive with the residual effects from the proposed project.

These other projects would also subject to the *Migratory Birds Convention Act, 1994*, and requirements to implement appropriate measures to avoid harm or death to migratory birds, their nests and eggs. As such, cumulative effects would be limited and would not measurably affect migratory bird populations. IAAC does not recommend further mitigation measures or a follow-up program.

Taking into consideration the recommended mitigation measures in Section 2.2.4 below, the likely cumulative effects on migratory birds would be low in magnitude and geographic extent as they are not expected to result in population levels changes and would be localized within the respective CDAs. The effects would be long term, occur infrequently, mainly during construction and maintenance activities, and most effects would be irreversible. For the types of projects considered, uncertainty is low as the effects are generally well understood and addressed with standard mitigation measures. The project's contribution to these cumulative effects on migratory birds is not significant.

IAAC concludes that cumulative adverse effects of the project on migratory birds are not likely to be significant as migratory birds would not likely be measurably diminished or lost.

2.2.4 IAAC's recommended mitigation measures for implementation by the proponent pertaining to migratory birds

Recommended mitigation measures that would potentially be included as conditions in the impact assessment decision statement
Carry out the project in a manner that protects migratory birds and avoids capturing, killing, taking, injuring or harassing migratory birds or destroying, taking or disturbing their eggs, or damaging, destroying, removing or disturbing nests protected under the Migratory Birds Convention Act, 1994 and its regulations or the Species at Risk Act or both, while taking into account Environment and Climate Change Canada's Guidelines to Avoid Harm to Migratory Birds.
Determine, under the direction of a qualified individual, the presence, or likely presence of migratory bird nest(s) protected under the Migratory Birds Convention Act, 1994 and its regulations, and migratory bird residences protected under SARA that may be adversely affected by any project activity prior to initiating the activity, and bird nests or residences on federal lands. Non-intrusive methods used to determine the presence or likely presence of migratory bird nests should be appropriately selected based on the habitat type.
Establish and delineate, under the direction of a qualified individual, setback distances around nest(s) and residence(s) whose presence is likely or confirmed by the qualified individual, within which that activity shall not occur while those nest(s) are protected under the Migratory Birds Convention Act, 1994 and its regulations or SARA or both. When establishing setback distances, take into account ECCC's Guidelines to avoid harm to migratory birds.
Develop and implement mitigation measures to prevent bank swallow from nesting in pits and quarries while taking into account ECCC's document Bank Swallow (Riparia riparia): in sandpits and quarries.
Refer to measures for accidental spills in Section 3.1 of this report.

2.3 Effects from physical activities carried out on federal lands

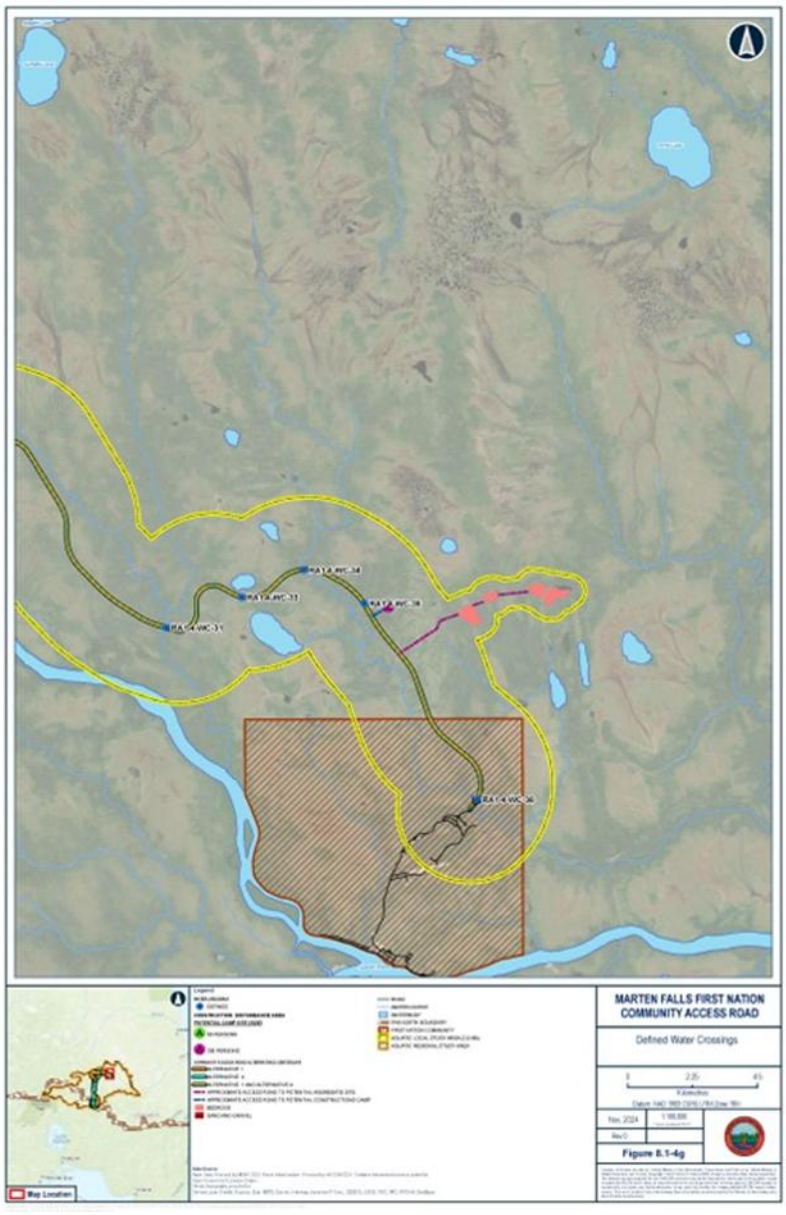
The project is likely to cause residual adverse effects resulting from the portion of the project carried out on the Marten Falls First Nation reserve, notably through habitat loss and degradation, an increase in mortality risk for federal species at risk and eastern migratory caribou, and an increase in air emissions. With the implementation of the recommended mitigation measures identified in Section 2.3.4, IAAC is of the view that the residual effects from activities carried out on federal lands are not likely to be significant as species at risk and eastern migratory

caribou populations are expected to remain sustainable and changes in air quality are expected to be localized, with air contaminant levels expected to remain below guidelines protective of human health at locations where people are known to reside or regularly use the land. Cumulative effects resulting from the portion of the project carried out on federal lands, in combination with other physical activities, are not likely to be significant, except for cumulative effects to caribou and wolverine habitat, which are likely to be significant to a low extent due to habitat loss and degradation on the Marten Falls First Nation reserve interacting with habitat changes from other projects throughout the species' respective ranges.

This section considers the assessment of effects from the project's physical activities being carried out on Marten Falls First Nation Reserve. Approximately 8 kilometres of the project's road would be constructed and operated on the Marten Falls First Nation reserve. Effects from this physical activity carried out on federal lands are anticipated to be restricted to Marten Falls First Nation reserve.

IAAC focused its assessment on the atmospheric environment as well as on species at risk and eastern migratory caribou and their habitats. IAAC also acknowledges potential effects to wetlands on federal lands but accepts the proponent's Impact Statement predictions that likely effects on wetlands would be localized with no net loss of function of wetland ecosystems, and that the net loss or alteration of wetlands would be negligible. Other effects from the project described in the report are inclusive of effects from physical activities carried out on federal lands, including effects on fish and fish habitat, including lake sturgeon (a species at risk), water quality (Section 2.1), migratory birds listed under the *Migratory Birds Convention Act, 1994* (Section 2.2), on species of importance to Indigenous communities (Section 4.3.1), and on the health, social and economic conditions of Indigenous Peoples (Section 4.3.3).

Figure 4: Location of the Marten Falls First Nation reserve intersected by the project



Source: Marten Falls Community Access Road Project, Environmental Assessment Report/Impact Statement, Figure 8.1-4g

2.3.1 Assessment of effects

2.3.1.1 Atmospheric environment

The project would result in changes to the atmospheric environment, including changes to air quality as well as increased noise and vibration on the Marten Falls First Nation reserve, largely due to particulate emissions generated from fugitive road dust during project construction and the operation of the road from vehicular traffic. Limited, short-term degradation of air quality may also occur during the construction phase due to road construction activities.

Predicted exceedances of air quality criteria may occur adjacent to the project; however, they are not expected to degrade air quality for sensitive receptors on federal lands or result in adverse health or environmental effects. Air quality modelling conducted by the proponent predicts localized exceedances of Ontario Ambient Air Quality Criteria (AAQCs) for particulate matter 10 (PM 10) and total suspended particulates (TSP) on or near the right-of-way under conservative, worst-case assumptions including maximum traffic volumes and elevated background concentrations. The exceedances would be primarily associated with fugitive dust emissions from vehicular movement on unpaved road surfaces and are predicted to occur within a limited distance from the road (approximately one kilometre or less) and away from known human receptor locations such as residences and sites where people regularly use the land.

To mitigate effects from air emissions, the proponent proposed to implement emissions management plans during construction and operations, which would include the use of environmentally friendly dust suppressants, and would consider additional measures, such as roadside vegetation, natural windbreaks, and speed limits. In addition, the recommended mitigation and follow-up program measures described to address change in quality of fishing experience in Section 4.3.1 would also mitigate the effects on air quality, as well as elevated noise levels during project construction and maintenance activities.

IAAC is of the view that, with the implementation of these mitigation measures, the project is likely to result in residual adverse changes to the atmospheric environment on federal lands that are localized, temporary and not expected to exceed relevant air quality thresholds at locations where people are known to reside or regularly use the land for extended periods, and elevated noise levels would be appropriately managed by meeting relevant noise guidelines.

2.3.1.2 Loss and degradation of species at risk and eastern migratory caribou habitat

IAAC focused its assessment on the following federal species at risk: little brown myotis (Endangered), northern myotis (Endangered), wolverine (Special Concern), rusty blackbird (Special Concern), short-eared owl (Special Concern), woodland caribou (boreal population, Threatened) transverse lady beetle (Special Concern). Woodland caribou (eastern migratory population) was also considered (assessed as Endangered by the

Committee on the Status of Endangered Wildlife in Canada [COSEWIC]). The project intersects potential habitat on the Marten Falls First Nation reserve for these species.

LSA for wolverine and caribou includes the CDA and extends ten kilometres on either side of the CDA (Figure 6 in this report). The LSA for little brown myotis, northern myotis, rusty blackbird, short-eared owl and transverse lady beetle includes the CDA and extends 3 kilometres on either side of it.

The project would result in the loss or degradation of species at risk and eastern migratory caribou habitat on federal lands. Direct loss of habitat for bats, wolverine, rusty blackbird, short-eared owl, transverse lady beetle and caribou from site preparation would include the removal of vegetation from the Marten Falls Nation reserve to clear land for the road. Regular maintenance activities during the operation phase would involve managing regrowth of vegetation in the CDA on federal lands. This could result in the destruction, degradation, and/or fragmentation of important habitat such as nests, roosts, dens, calving areas, winter areas, and travel areas, as well as the displacement of individuals from these habitats.

Effects on these species also include sensory disturbances during construction and operation from activities including earth hauling, vegetation clearing, construction lighting and vehicles travelling on the road. Sensory disturbances may lead to functional fragmentation of federal species at risk habitat as species alter their movements and behaviour to reduce their utilization of the area and to avoid human disturbance. In addition, the operation of the road may create a linear barrier to movement of species at risk on the Marten Falls First Nation reserve, especially caribou and wolverine. These effects are likely to result in changes to the distribution of species at risk on the Marten Falls First Nation reserve.

Effects and associated mitigation measures for wolverine and caribou are further described in the Hunting and Trapping subsection of Section 4.3.1. Effects on rusty blackbird and short-eared owl would be similar to effects on migratory birds described in Section 2.2 and the mitigation measures for migratory birds would be appropriate to mitigate effects on these species. To mitigate effects to species at risk bats and transverse lady beetle, the proponent committed to, where possible, minimize vegetation clearing, implement reclamation of temporary areas of disturbance, buffer areas to minimize impacts to potential roosting areas and waterbodies, project personnel wildlife awareness training and conduct maintenance activities outside of sensitive timing windows.

IAAC understands that authorizations under SARA for activities occurring on federal land that affect the individuals or residences of species listed under SARA as Threatened or Endangered would apply to the project. This legislative mechanism would manage effects to Threatened and Endangered federal species at risk individuals and residences, apart from effects stemming from broader habitat degradation and loss, including adverse changes to caribou critical habitat, and would ensure implementation of mitigation

measures as well as the identification of further mitigation measures for site-specific concerns during the permitting stage.

IAAC is of the view that, with the implementation of these mitigation measures, there would be loss and degradation of species at risk and eastern migratory caribou habitat on federal lands, notably through fragmentation of wolverine and caribou habitat.

2.3.1.3 Injury or death of species at risk and eastern migratory caribou

The project may result in the injury or death of the above listed federal species at risk and eastern migratory caribou individuals on Marten Falls First Nation reserve. During construction and operation, collision with vehicles and equipment, changes to predator-prey dynamics through the creation of linear corridors, alteration of movement, vegetation clearing, and increased access by humans could increase federal species at risk injury or mortality rates. Aerial species are susceptible to vehicular collisions during project operation, while collision risks are lower for caribou and wolverine as they generally avoid areas with anthropogenic disturbance.

To mitigate effects from injury or death, the proponent committed to follow best practices where possible, including implementing speed limits which are effective to prevent vehicular collisions (see recommended mitigation measures in Section 4.3.3 of this report).

IAAC is of the view that, with the implementation of these mitigation measures, the project is likely to result in limited and infrequent injury or death of species at risk and eastern migratory caribou.

2.3.2 Residual effects

Based on the above assessment, IAAC is of the view that the project would likely result in residual adverse effects from physical activities carried out on federal lands resulting from changes to the atmospheric environment, degradation and loss of species at risk and eastern migratory caribou habitat and injury or death to species at risk and eastern migratory caribou.

The residual effects, taking into account the mitigation measures described above, would be low in magnitude and geographic extent limited to LSA. The effects would generally occur infrequently, but indefinitely throughout the life of the project, with effects being partially reversible by the operation phase. There is a low to moderate level of uncertainty specific to species at risk on the federal lands portion of the project. Even while acknowledging this uncertainty, populations are expected to remain sustainable and air contaminant and noise levels are expected to remain below applicable guidelines at locations where people are known to reside or regularly use the land.

IAAC concludes that the adverse residual effects of physical activities carried out on federal lands are not likely to be significant.

2.3.3 Cumulative effects

IAAC considered Marten Falls First Nation's Draft Community-Based Land Use Plan and other foreseeable projects in the area, and is of the view that there are no foreseeable physical activities with expected effects on federal lands that would interact with the residual effects of the project on the atmospheric environment, species at risk, and eastern migratory caribou likely to occur on the Marten Falls First Nation reserve.

Known projects outside federal lands are not anticipated to result in measurable effects on the atmospheric environment within the Marten Falls First Nation reserve due to spatial separation. The residual adverse effects of the project on Marten Falls First Nation reserve land in combination with other past, present, and reasonably foreseeable projects, are likely to have cumulative effects primarily through loss or degradation of species at risk and eastern migratory caribou habitat. The proposed Webequie Supply Road Project, the proposed Northern Road Link Project, and the proposed Anaconda and Painter Lake Roads Upgrades Project, the proposed Rapid Lynx Broadband Project, and mineral exploration followed by mining at the proposed Eagle's Nest site have the potential to interact with the residual adverse effects from the project, in relation to habitat loss and degradation (including fragmentation), through clearing and grubbing activities, sensory disturbances from construction equipment and increased traffic.

Although federal and provincial legislative frameworks would apply to manage the effects of the projects on species at risk, effects from the other projects are likely to be additive with the residual effects from the proposed project. These cumulative effects would be low in magnitude, primarily through caribou and wolverine habitat loss and degradation and, to a lesser extent, habitat changes for little brown myotis, northern myotis, rusty blackbird, short-eared owl, gypsy cuckoo bumble bee, nine-spotted lady beetle, transverse lady beetle, and yellow-banded bumble bee. ECCC noted that cumulative effects to caribou and caribou habitat may be significant despite mitigation, and MECP, noted that, although cumulative disturbance within the Missisa Range would increase, overall disturbance is expected to remain below the 35% threshold identified in the federal recovery strategy.

IAAC concludes that cumulative effects resulting from physical activities carried out on federal lands in combination with other projects are likely to be not significant for changes to atmospheric environment and species at risk, except for caribou and wolverine, which are likely to be significant to a low extent due to changes in habitat availability and function that would result from the project and other foreseeable projects, together, altering movement patterns and habitat availability, including within the Marten Falls First Nation reserve.

2.3.4 IAAC's recommended mitigation measures for implementation by the proponent pertaining to activities carried out on federal lands.

Recommended mitigation measures that would potentially be included as conditions in the impact assessment decision statement include:
With respect to the atmospheric environment on federal lands: • Implement, at a minimum, the following mitigation measures to control fugitive dust emissions from the project, as appropriate: o use water or an environmentally acceptable alternative to stabilize the surface of project roads and areas that may generate dust.
With respect to bats, specifically little brown myotis and northern myotis: • follow recommended timing windows by avoiding construction and maintenance activities, during the period of May 1 to August 31; establish and delineate, under the direction of qualified individuals, a vegetation setback of 120 metres for construction and maintenance activities from any maternity roosting habitat identified; ensure project employees and contractors are trained to identify potential maternity roosting habitat and be aware of protocols to follow should any be found including: o cease work and document the feature; notify Marten Falls First Nation, ECCC and IAAC; and ensure the established setback, including the identified maternity roosting habitat, remains in place until ECCC approves SARA permit.
With respect to bird species at risk: • Do not undertake activity associated with the project that could harm the nesting of birds that are species at risk on the Marten Falls First Nation reserve, to avoid the destruction of nests, eggs or nestlings. In doing so: o determine the dates of relevant nesting periods for any year during which these activities are carried out. Inform IAAC of these dates, including a justification, before carrying out these activities.
• Do not undertake or continue any activity likely to harm nesting unless this is not technically or economically feasible. If it is not feasible, provide a justification to IAAC and develop and implement additional mitigation measures to avoid adverse effects on birds that are species at risk during nesting. Provide these measures to IAAC before implementing them.
Refer to Section 4.3.1 and Section 4.3.3 of this report for measures to reduce and monitor sensory disturbance, as well as measures to monitor wildlife species.

3 Malfunctions and accidents

Although unlikely to occur, certain malfunctions and accidents associated with the project could cause residual adverse federal effects. For example, an accidental fire or explosion or a structural failure of a project component, such as the road surface, bridge or culvert, may impact fish and fish habitat, migratory birds, as well as traditional practices and community well-being of Indigenous communities. Recommended mitigation measures to prevent potential malfunctions and accidents are listed in Section 3.1.1.

3.1 Assessment of effects

Malfunctions and accidents may be associated with the project. Likely scenarios are vehicle accidents or mechanical malfunctions, including any resulting accidental spills of hazardous material. These and their associated adverse federal effects are described in Sections 2.1, 2.2, and 4.3.1 to 4.3.3. Adverse federal effects of unlikely malfunction and accident scenarios are described below.

Although unlikely to occur, a structural failure of a project component or accidental fires or explosions associated with project components could result in adverse effects to migratory birds, wildlife important to Indigenous traditional practices, and community well-being.

A structural failure of a project component (e.g., road surface failure, bridge failure, culvert failure or a storage facility accident) due to faulty design, extreme weather, seismic activity or wildfire event could lead to increased erosion or sedimentation, changes to hydrology and hydraulics, and the potential for debris or materials to enter nearby waterbodies, which could adversely affect fish and fish habitat, alter traditional fishing by Indigenous persons that practice in the area and impact the cultural experience of Indigenous communities that maintain a connection to the land or have cultural sites in the area.

The likelihood of a structural failure of a project component may be influenced by changing environmental conditions over the lifespan of the project. Climate change is expected to increase the frequency and intensity of extreme weather events in the region, including heavy precipitation, flooding, freeze-thaw cycles, and wildfire conditions. These stressors can place additional demands on project infrastructure and increase the potential for malfunctions or accidents, such as erosion, overtopping, or structural failure of highway infrastructure.

To prevent structural failures, the project components would be designed in accordance with applicable federal and provincial standards and codes such as the Canadian Highway Bridge Design Code CSA S6:25, Ontario's Roadside Design Manual and Structural Manual, Drainage Management Manual, Highway Drainage Design Standards, and Gravity Pipe Design Guidelines. To manage climate-related stressors, the proponent would design project infrastructure to meet applicable codes and standards that address wildfires, and extreme weather events. This would include designing highway drainage infrastructure such as bridges, culverts, roadside ditches, and equalization culverts for the floating road portion, using best practices and engineering guidance. Designs would be based on historical climate data, incorporating effects from temperature, as well as future climate scenarios, including future changes in extreme rainfall over the expected lifespan of the structures. Additionally, the proponent committed to conduct routine inspection and maintenance of the road during the operation phase in accordance with applicable provincial standards for highway infrastructure, with repairs undertaken as required, to maintain structural integrity of project components. The proponent also indicated that storage facilities, particularly fuel storage areas, would have aboveground storage tanks with secondary containment and that fuel and other hazardous materials would be managed in accordance with the Canadian Council of Ministers of the Environment's Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products to minimize the likelihood of a storage breach.

Accidental fires or explosions associated with project components (e.g., equipment, fuel storage, maintenance activities, or camps) could result in localized harm or death of migratory birds and other wildlife, or temporary displacement of the wildlife due to smoke, noise, or habitat disturbance. Fires and explosions could reduce habitat quality in surrounding areas used for traditional purposes, as well as increase safety risks and cause disruption to harvesting activities or travel, which may contribute to stress and add emotional distress.

Ontario has legislative and regulatory requirements related to fire prevention, fire safety, and emergency preparedness — including requirements related to wildland fire prevention, fire safety planning and suppression equipment at camps and facilities, and fuel storage and handling — which are intended to reduce fire risk and support effective response.

Fire prevention and preparedness plan and a fire mitigation program and following the Ontario Regulation 207/96 would be implemented during construction and maintenance. IAAC recommends that the proponent's fire prevention and preparedness measures, include safe fuel handling and storage practices, regular maintenance of equipment to reduce ignition risks, and clear emergency response procedures; appropriate firefighting equipment at project sites; and trained staff capable of responding quickly and effectively to limit the spread of fire and minimize effects on wildlife and Indigenous communities.

3.1.1 IAAC's recommended mitigation measures for implementation by the proponent pertaining to malfunctions and accidents

Recommended mitigation measures that would potentially be included as conditions in the impact assessment decision statement:
Develop, prior to construction, and maintain, during construction, an accidents and malfunctions response plan including: • a description of potential accidents and malfunctions that may cause adverse federal effects, including both worst-case and more likely alternate scenarios; measures for each scenario aligned with ECCC's National Wildlife Emergency Response Framework; and clearly defined roles and responsibilities for the proponent, relevant authorities and other parties involved in response efforts.
In the event of an accident or malfunction during construction: • notify relevant emergency response authorities; inform Indigenous communities as soon as feasible, and IAAC within 48 hours, while providing: o the date, time, and location of the accident or malfunction; o a summary of the accident or malfunction; o the substance and quantities released; and o the relevant authorities notified and involved in the response; and • submit a report to IAAC within 60 days, describing: o the incident and its adverse federal effects; o measures taken to mitigate the adverse federal effects; o feedback from Indigenous communities and relevant authorities; o residual effects and any additional mitigation or monitoring measures; and steps taken to prevent recurrence.
Recommended mitigation measures that would be potentially ensured by the Government of Ontario:
Implement the following mitigation measures to prevent structural failure of project components: • undertake routine inspections of project component/roadway infrastructure, including bridges, culverts, road embankments, and upstream/downstream riverbanks, and complete repairs where required; • design project infrastructure to meet applicable codes and standards that address seismic activity, wildfires, and extreme weather events; and

• design roadway drainage infrastructure such as bridges and culverts based on historical climate data with temperature incorporation and projected future changes in extreme rainfall over the lifespan/design service life of the structures.
Develop and implement an Emergency Response Management Plan for malfunction and accident scenarios that includes, at minimum: • coordinated procedures for evacuation, communication, and emergency response for accident and malfunction scenarios.
Refer to Section 2.1.4.1 for erosion protection and sediment control measures.

4 Impacts on Indigenous Peoples and their rights

Indigenous Peoples have a deep connection to their lands, territories, and resources, and an important constitutional relationship with the Crown (i.e. the federal and provincial governments acting on behalf of the Crown), making their participation essential to decision-making on the impacts of major projects. Impact assessments must evaluate the potential impact of a project on Indigenous Peoples and their rights. The government must assess the extent to which consultation and engagement with Indigenous communities has been carried out meaningfully, in keeping with Canada's commitment to implement the United Nations Declaration on the Rights of Indigenous Peoples. Recognizing the interconnected nature of these considerations, and in the spirit of respectful and meaningful consultation and engagement, IAAC presents this information in a dedicated, integrated section.

4.1 Consultation and engagement

IAAC is responsible for leading Crown consultation and engagement with Indigenous Peoples for the Government of Canada throughout the impact assessment. Both IAAC and the proponent maintain bilateral relationships with Indigenous communities throughout the impact assessment, with IAAC ensuring that consultation and engagement are tracked, and responsive to the issues and interests raised. For the purposes of this project, IAAC coordinated with the Government of Ontario to align consultation and engagement periods.

4.1.1 IAAC-led consultation and engagement

The federal Crown's consultation objectives are to meet the duty to consult, uphold the Honour of the Crown, and support long term relationships grounded in shared reconciliation goals. The scope of this duty depends on the specific context and facts before decision makers, and its implementation is guided by government policy, best practices, and evolving jurisprudence. In fulfilling this duty, the Crown seeks:

- to demonstrate meaningful efforts to understand Indigenous concerns and potential impacts;
- to provide opportunities, proportionate to the level of potential impacts on rights, for Indigenous communities to learn about the project, assess its implications, and communicate their views;
- to accurately understand and respond to issues raised, including through mitigation and accommodation, where appropriate; and
- to maintain a flexible, accessible, reasonable, and fair process grounded in good faith, respect, and recognition of the uniqueness of each Indigenous community.

IAAC consulted and engaged with potentially impacted Indigenous communities as part of a whole-of-government approach, involving federal authorities where appropriate. IAAC sought to reach a consensus with Indigenous communities on the approach to the assessment of the effects and impacts on Indigenous rights.

Indigenous communities that were invited to participate in consultation include those with the potential for adverse impacts on potential or established Aboriginal or treaty rights (section 35 rights). IAAC identified the Indigenous communities whose section 35 rights may be impacted by the project:

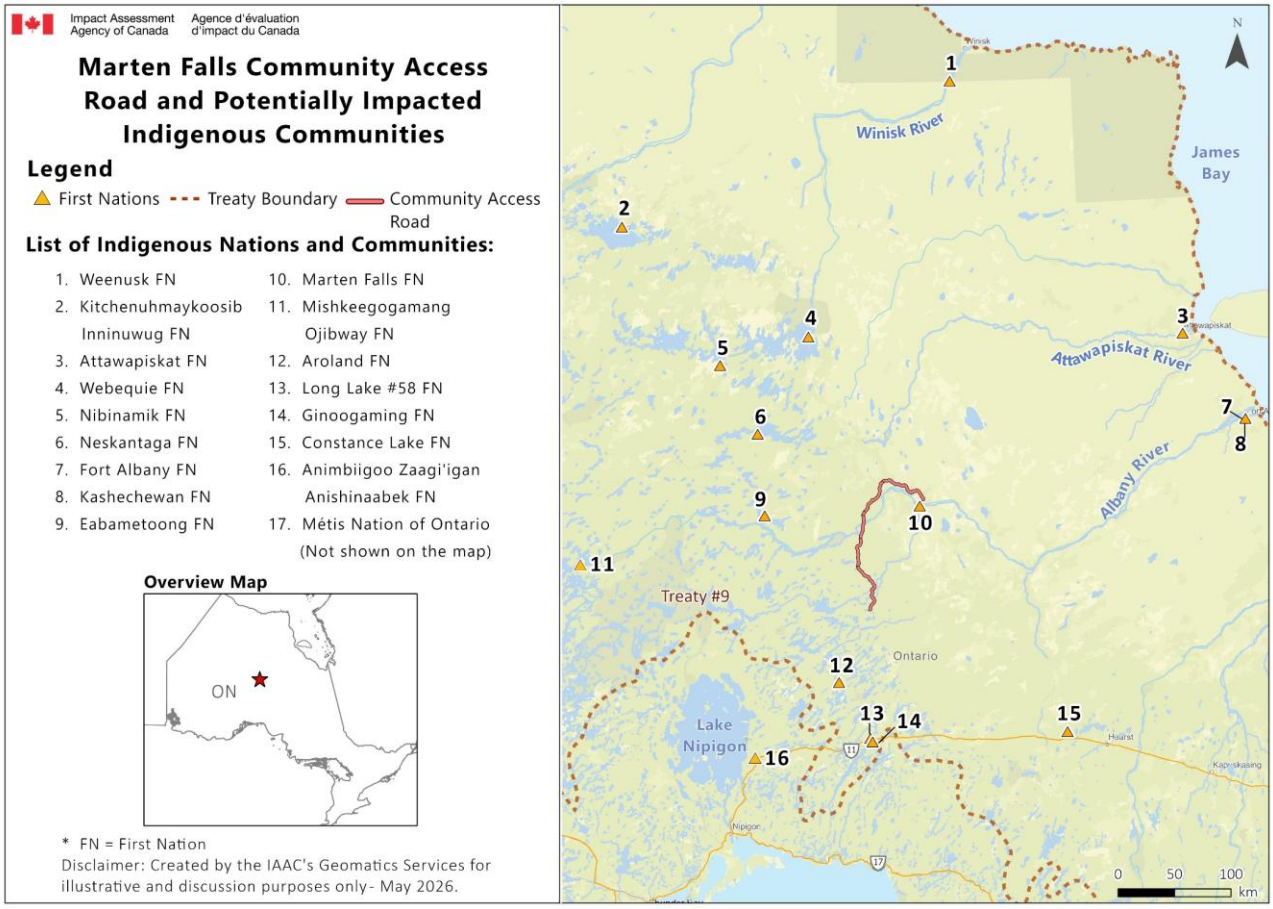
- Animbiigoo Zaagi'igan Anishinaabek
- Aroland First Nation
- Attawapiskat First Nation
- Constance Lake First Nation
- Eabametoong First Nation
- Fort Albany First Nation
- Ginoogaming First Nation
- Kashechewan First Nation
- Kitchenuhmaykoosib Inninuwug First Nation
- Long Lake #58 First Nation
- Marten Falls First Nation

- Neskantaga First Nation
- Nibinamik First Nation
- Webequie First Nation
- Weenusk First Nation

Mishkeegogamang Ojibway First Nation and Métis Nation of Ontario are not currently participating in consultation with IAAC on the project; however, IAAC continues to notify these two communities of all major milestones and opportunities to participate in the impact assessment process.

Figure 5 shows the approximate locations of the abovementioned Indigenous communities in relation to the proposed Marten Falls Community Access Road.

Figure 5: Approximate location of potentially impacted Indigenous communities



Source: IAAC

Throughout the IA process, IAAC kept Indigenous communities informed of process steps and timelines and maintained ongoing dialogue with the above listed Indigenous communities. IAAC supported Indigenous participation by sharing information, providing information about the IA process, offering plain language updates, and implementing the IEPP (the list of Indigenous groups identified by IAAC for consultation was updated to include Métis Nation of Ontario (Region 2) based on their interest in the project). IAAC also sought to understand how communities wished to work with IAAC and adapted consultation approaches to reflect the preferences of individual Indigenous communities.

IAAC instructed the proponent in the TISG to provide clear impact assessment information and project maps, work with Indigenous communities to gather and incorporate Indigenous Knowledge and offer participation in technical discussions. The proponent's Record of Consultation and Engagement indicates that they complied with the requirements set out in Section 6 of the TISG. Indigenous communities identified potential impacts on their rights and on environmental, health, social and economic conditions, provided Indigenous Knowledge, and offered input to inform the Impact Statement. IAAC also created opportunities for Indigenous communities to learn about the project and the IA process, raise concerns about potential effects within federal jurisdiction and potential impacts on the exercise of section 35 rights, and discuss possible mitigation and accommodation measures, where appropriate. IAAC sent written information, organized in-person and virtual meetings. Comments and perspectives of Indigenous communities, including Indigenous Knowledge where provided, informed the identification of valued components, the assessment of potential effects and pathways of effects, and conclusions about the significance of these effects. Comments, perspectives, and Indigenous Knowledge provided by Indigenous communities also informed the Crown's understanding of potential adverse impacts on the exercise of section 35 rights and the effectiveness of proposed measures to avoid or minimize impacts on community rights and interests.

IAAC integrated the Crown's consultation and engagement activities throughout the IA process and invited all seventeen Indigenous communities to review and provide written comments during formal comment periods on the Summary of the Initial Project Description (September 11, 2019 - October 1, 2019), draft TISG and the IEPP (December 19, 2019 - January 28, 2020). As part of the consultation initiatives that were ongoing outside of the formal comment periods, starting July 15, 2019, IAAC provided opportunities to meet with communities virtually and in-person, provided material to support community led information sessions, and developed summaries of the IAAC's understanding of potential impacts from the project.

IAAC provided advance notice to Indigenous communities about the process steps following the proponent's submission of the Impact Statement and offered to set up meetings to provide an overview of IAAC's preliminary analysis of adverse federal effects that would result from the project. IAAC also provided all seventeen Indigenous communities with updated individualized summaries for review and validation, outlining

what IAAC had heard regarding potential impacts of the project on each community throughout the entirety of the IA process. Input to these summaries was used to inform the impacts on rights assessments and this report.

Throughout the IA process, IAAC also held meetings with sixteen Indigenous communities. Recognizing the remote status of most potentially impacted Indigenous communities and the preferences of many communities for in-person meetings, IAAC strove to meet with Indigenous communities in-community upon request whenever possible. IAAC held 68 meetings with Indigenous communities throughout the IA process, 20 of which took place in-person.

IAAC supports Indigenous participation and consultation activities through its Participant Funding Program. In total, Indigenous recipients were allocated $1,174,000.51 in grant and contribution funding to participating Indigenous communities through this program.

4.1.2 Proponent-led engagement

The proponent engaged with Indigenous communities to support IAAC's assessment of effects and impacts on rights. The proponent's engagement does not replace or substitute Crown consultation but does provide important information to support the Crown's informed understanding of potential impacts and appropriate responses.

Beginning in January 2019, the proponent engaged all seventeen potentially impacted Indigenous communities identified by IAAC to discuss their practice of section 35 rights, use of lands and resources, and the potential effects of the project.

Due to the COVID 19 pandemic, the 2021 forest fires, severe winter conditions in 2021–2022, and unforeseen regulatory requirements, Marten Falls First Nation was unable to meet the legislated federal timelines for submitting the Community Access Road Impact Statement. The Impact Statement had originally been required by February 24, 2023. These circumstances led the proponent to request a three and a half year extension in November 2022, which the Agency granted in January 2023, providing additional time to complete the Impact Statement Phase and submit the required information and studies.

The proponent provided financial support to communities to retain technical experts to review baseline studies, alternatives assessments, and other documents; conduct traditional knowledge, traditional land and resource use studies, and socio-economic studies, as well as independent Indigenous-led assessments; and hire professional and legal advisors and community support, where appropriate.

All potentially impacted Indigenous communities were engaged separately to gather their knowledge and expertise for inclusion in the proponent's Impact Statement. The engagement activities organized by the proponent included communications by email,

letters, social media outreach, virtual and in-person meetings and working sessions, and the sharing of information and documents.

The engagement process during the proponent's preparation of the Impact Statement took place over five rounds:

- Round 1 (October 29, 2021 to June 30, 2022) Notice of Commencement of Environmental Assessment: provided information to determine Indigenous communities' level of interest in the Community Access Road, interest among Indigenous communities to meet with the proponent, preferred methods for receiving information during the Assessment Process, and interest in developing community specific consultation and engagement plans.
- Round 2 (July 1, 2022 to May 31, 2023) Effects Assessment Methods: provided a summary of feedback on the consultation and engagement approach, planned and completed existing conditions field programs, the Assessment Process, study areas, project phases, criteria and indicators, environmental interactions, and net effects characteristics; requested information on Indigenous community values, potential effects, and impact management measures, including effects on Aboriginal or Treaty Rights; confirmed through early release of Progress Report 1 that previous input was captured appropriately; and shared cumulative effects information through an explainer video and newsletter.
- Round 3 (June 1, 2023 to July 31, 2024) Identification of Preferred and Alternatives: provided a summary of feedback on alternative routes, proposed mitigation measures, route selection categories and technical considerations, comparative analyses of potential net effects, and preliminary road design; requested information on cumulative effects methodology, potential follow up and monitoring measures, projects and activities that may act cumulatively with the Community Access Road, opportunities for Indigenous community participation, and potential cumulative effects; and confirmed through early release of Progress Report 2 that previous input was captured appropriately.
- Round 4 (August 1, 2024 to September 5, 2025) Review of the Draft Environmental Assessment / Impact Statement: provided a summary of feedback on ongoing issues resolution, the Draft Environmental Assessment / Impact Statement, proposed impact management and follow up measures including monitoring and adaptive management, cumulative effects assessment results, and draft conclusions; and confirmed through early release of Progress Report 3, the Draft Record of Consultation and Engagement for Interested Persons, and the Draft Environmental Assessment / Impact Statement that previous input was captured appropriately.
- Round 5 (September 6, 2025, to February 20, 2026): provided confirmation through release of Progress Report 4 that previous input was captured appropriately, and supported review of the Final Environmental Assessment / Impact Statement (outside this reporting period).

4.1.3 Indigenous Knowledge provided with respect to the project

IAAC collaborated with Indigenous Knowledge holders to ensure their Knowledge was respected and meaningfully incorporated into the impact assessment and this report. When Indigenous Knowledge was shared, IAAC considered it when writing this report to help understand how the project might affect Indigenous communities and their rights.

Indigenous Knowledge that was shared informed multiple parts of the assessment, including:

- describing current use of lands and existing environmental conditions;
- identifying culturally significant species, places, and practices;
- identifying and assessing potential pathways of effects;
- evaluating the significance of predicted effects; and
- developing measures to mitigate or monitor adverse effects.

The integration of Indigenous Knowledge into the assessment was guided by Indigenous communities and ethical standards, including the First Nations principles of Ownership, Control, Access, and Possession (OCAP®). IAAC recognizes that Indigenous Knowledge remains the intellectual property of the respective Knowledge Holders and Indigenous communities, who determine how their Knowledge is shared, interpreted, and protected. While IAAC has described how Indigenous Knowledge informed the assessment in this report, as available, IAAC recognizes that Knowledge holders are the only people who can truly define Indigenous Knowledge for Indigenous Peoples.

The proponent engaged with Indigenous communities to complete studies as part of the proponent's Indigenous Knowledge and Land and Resource Use Program or the Socio-Economic Primary Data Collection Program. The following Indigenous communities completed Indigenous Knowledge studies as part of those programs:

- Fort Albany First Nation
- Kashechewan First Nation
- Marten Falls First Nation
- Webequie First Nation
- Weenusk First Nation

Weenusk First Nation and Kashechewan First Nation opted to share their Indigenous Knowledge studies with IAAC. Knowledge in these studied informed IAAC's assessment of effects in federal jurisdiction, including impacts on Indigenous Peoples and their rights.

Pursuant to the Cooperation Plan for the project between IAAC and MECP and consistent with the Ontario-Canada Cooperation Agreement, IAAC and the Government of Ontario shared, as appropriate, information received from Indigenous communities, while ensuring that confidential Indigenous Knowledge was protected.

4.2 Federal Crown's Duty to Consult

This section provides IAAC's and Indigenous communities' views of the Crown's consultation and accommodation efforts up until the drafting of the final IA Report. At the time of this draft IA Report, IAAC's current understanding is that the Crown's has meaningfully and adequately fulfilled the duty to consult and, where appropriate, accommodate Indigenous Peoples as recorded in the consultation record. The information below provides a summary of consultation activities to date, of procedural considerations, and of how well the Crown worked to understand and solve the concerns raised by Indigenous communities. This section will be updated in the final IA Report.

4.2.1 Adequacy of federal Crown consultation

IAAC's approach to consultation was guided by Indigenous communities, respecting the preferred approaches and means for consultation expressed by Indigenous communities throughout the IA process, as outlined in the IEPP and in Section 4.1 of this report. Sections 4.3.1, 4.3.2, 4.3.3, and 4.4 provide detailed descriptions regarding IAAC's understanding and conclusions on residual adverse effects and impacts to rights, considering recommended mitigation measures regarding effects on Indigenous Peoples' current use of lands and resources for traditional purposes; structures, sites or things of historical, archaeological, or architectural significance to Indigenous Peoples and physical and cultural heritage; and health, social and economic conditions; and with respect to adverse impacts on the exercise of rights. Further mitigation measures could be established throughout the remaining assessment period.

To inform federal decision making on the project, Indigenous communities may provide input directly to decision makers, including expressions of consent, non-objection, or non-consent with regarding the conclusions of this IA Report and IAAC's draft recommendations.

Throughout the IA process and leading up to the comment period on the draft IA Report, Indigenous communities provided perspectives on the Crown's consultation process for the project, including regarding its adequacy in responding to issues raised and outstanding concerns. To help validate and accurately reflect the issues of importance identified by communities, IAAC provided written summaries on December 19, 2019, February 24, 2020, October 19, 2022, and February 9, 2026, to each of the communities of what had been heard.

4.2.1.1 Perspectives of Indigenous communities regarding the Crown's consultation process

IAAC was made aware that Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation had raised concerns regarding the regulatory process in general and/or the Crown's consultation conduct, including:

- Concerns regarding accelerated, strict, compressed or overwhelming timelines that were described as unworkable and limiting meaningful participation and community driven engagement.
- Concerns regarding lack of capacity, limited staff and expertise, insufficient or inadequate participant funding, and high costs associated with meaningful participation.
- Concerns regarding project splitting, separate and overlapping processes, and a significant consultation burden, including large volumes of documentation.
- Concerns regarding a one-sided, Crown driven regulatory process and unilateral decision making, including that the process does not reflect a Treaty relationship or government to government consultation, and concerns regarding the Crown's ability to meet its duty to consult, the Honour of the Crown, and free, prior, and informed consent (FPIC).

IAAC acknowledges the views of Indigenous communities regarding timelines associated with the IA process for this project. IAAC started consulting and engaging communities in August 2019, early in the process and throughout the IA process to support informed participation. This included structured and ongoing opportunities for participation and continuous availability for additional discussions as needed. Indigenous communities were provided opportunities to identify issues of concern, potential impacts on their section 35 rights and interests, and any concerns they considered outstanding or unaddressed.

IAAC recognizes that communities are participating in overlapping consultation processes and may face capacity constraints. In response, IAAC sought to minimize consultation fatigue and burden by ensuring that meetings provided a space to discuss the project as well as the concurrently occurring impact assessment processes for the proposed Webequie Supply Road and Northern Road Link projects. Materials on potential project effects within federal jurisdiction incorporated information about all three projects to the extent possible. IAAC met with communities in their preferred locations and formats, including travelling to communities to reduce time and cost burdens.

With regards to the Crown's consultation obligations, IAAC works to advance the Government of Canada's commitment to the United Nations Declaration on the Rights of Indigenous Peoples by meaningfully involving and partnering with Indigenous Peoples during all phases of federal assessments through methods such as providing participant funding, keeping communities informed of process steps and timelines, seeking opportunities for dialogue on potential impacts and how they could be addressed, including in person meetings, and providing summaries of what IAAC heard during consultations regarding potential impacts on Indigenous communities and their rights. IAAC is committed to implementing the objectives of the UN Declaration through the IAA, which was written with the implementation of the Declaration and supporting policies and procedures in mind. The UN Declaration references FPIC in relation to a range of specific and general circumstances, particularly in article 32.2 relating to the approval of any project affecting Indigenous Peoples' lands, or territories, or other resources. Principle 6 of the Government of Canada's Principles respecting the Government of Canada's relationship with Indigenous Peoples recognizes that meaningful engagement with Indigenous Peoples seeks to secure their FPIC when Canada proposes to take actions that impact them and their rights. This principle reflects the commitment to new relationships that build on and go beyond the legal duty to consult. IAAC understands the FPIC standard in the UN Declaration as requiring a robust process of consultation.

IAAC consulted with Indigenous communities in a manner consistent with meeting the Crown's obligations under section 35 of the *Constitution Act, 1982*, and sought to understand and be responsive to potential project-related impacts on Indigenous rights and interests. IAAC began its consultations early and continuously shared information with communities to support their informed participation in the process. IAAC provided notice that FPIC was a goal of consultation and has provided each community with an opportunity to explicitly state their FPIC or lack thereof regarding the project and the IA process. IAAC recognizes that Indigenous communities may have different views regarding what FPIC means for the project's assessment and/or what IAAC's approach to consultation should have been. IAAC appreciates the feedback provided and sees opportunity to collaboratively further develop approaches to FPIC.

4.3 Effects on Indigenous Peoples

The project is likely to cause adverse effects to Indigenous Peoples, as set out in the definition of adverse effects within federal jurisdiction in section 2 of the IAA, as well as positive effects. Section 4.3 assesses these effects, which were informed by concerns and aspirations shared by the Indigenous communities identified in Section 4.1.1 of this report.

4.3.1 Effects on current use of lands and resources for traditional purposes by Indigenous Peoples

The project is likely to cause residual and cumulative adverse effects on the current use of lands and resources for traditional purposes by Indigenous Peoples through alterations to the practice of traditional activities including fishing, hunting, trapping, and plant harvesting due to changes in resource availability, safe access and quality of experience. With the implementation of the recommended mitigation measures identified in Section 4.3.1.4, IAAC is of the view that residual adverse effects on current use of lands and resources for traditional purposes by Indigenous Peoples are likely to be significant to a low extent and cumulative effects of the project, in combination with other physical activities, also are likely to be significant to a low extent for traditional activities except for hunting of caribou and other ungulates, for which the effect would be significant to a moderate extent.

IAAC's assessment of effects to current use of lands and resources for traditional purposes by Indigenous Peoples focused on alterations to the practice of traditional activities (fishing, hunting, trapping, and plant harvesting) due to changes in resource availability, safe access and quality of experience. IAAC considered information from the proponent's Impact Statement and concerns raised by Indigenous communities identified in the IEPP about the potential effects of the project on their traditional practices.

The project would intersect and overlap both wetland and upland areas. The wetlands provide diverse habitats for waterfowl, shorebirds, beaver, muskrat, amphibians, and wetland songbirds such as rusty blackbird (a species of Special Concern under both the federal SARA and Ontario's *Species Conservation Act),* and they also support caribou movement, nursery and calving areas, and wintering areas within the larger peatland complexes that form part of the boreal caribou range's (a Threatened species under both the SARA and Ontario's *Species Conservation Act*), and eastern migratory caribou winter range.

The upland areas include continuous coniferous, deciduous, and mixed forests. Upland habitats with mature coniferous and mixed stands provide important cover, forage, and travel corridors for a range of wildlife, including large mammals such as moose and caribou, as well as certain furbearers like the American marten.

Climate change is expected to bring warmer temperatures and more frequent extreme weather events over time, which may affect the timing, distribution, and health of plants and wildlife important to the traditional activities of Indigenous Peoples.

IAAC considered effects within the CDA and within LSAs and RSAs defined for each traditional activity as described in the fishing, hunting and trapping, and plant harvesting subsections below.

4.3.1.1 Assessment of effects

Fishing

Animbiigoo Zaagi'igan Anishinaabek, Fort Albany First Nation, Long Lake #58 First Nation, and Marten Falls First Nation, expressed concern regarding the impact of project activities during the construction and operation phases causing a loss or alteration to fish habitat. IAAC is of the view that the project would result in changes to traditional fishing in waterways identified by the proponent and Indigenous communities (i.e., along the Albany River) through construction and operation activities. Project activities that would cause changes to traditional fishing include clearing of aquatic and riparian vegetation to prepare the terrain for project components (e.g., road right-of-way, access roads and construction staging areas); installation of temporary flow isolation structures; blasting near waterbodies for in-water work; construction and maintenance of water crossing structures; and noise from traffic as well as from equipment and machinery operation. These project activities would potentially cause localized reductions (or perceived reductions) in fish availability; temporarily reduce access to fishing locations due to restricted navigability during in-water work activities; and reduce the quality of the fishing experience through sensory disturbances and the potential for an increase in persons fishing in the area. Animbiigoo Zaagi'igan Anishinaabek, Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation, have identified fishing as an important traditional activity and have notably expressed concerns regarding potential changes to fish availability and access to harvesting areas.

IAAC considered effects to traditional fishing within the CDA as well as within the fish and fish habitat LSA and RSA described in Section 2.1.

Change in fish availability

As described in Section 2.1, construction and maintenance activities would have residual effects on fish and fish habitat leading to localized reductions in fish availability within the CDA. IAAC is of the view that the recommended mitigation measures and follow-program included in Section 2.1.4 would maintain the fish available to support fishing in the LSA and RSA. Further, IAAC understands that fishing licenses issued by the Ontario MNR under Ontario's *Fish and Wildlife Conservation Act* regulates licensed fishing in Ontario for non-rights-based harvest, once conservation goals regarding fish and fish habitat are met.

Change in access to fishing locations and fishing experience

Aroland First Nation, Eabametoong First Nation, Fort Albany First Nation, and Nibinamik First Nation raised concerns regarding the potential loss or restriction of access to preferred sites for fishing. IAAC understands that in-water work to construct and maintain the water crossings would temporarily constrain navigation, resulting in continued but reduced safe access to fishing locations until completion of the work. The proponent notes that there may be temporary restrictions on access during the construction phase. However, the proponent committed to providing advance notice of construction activities and ensuring navigability of water crossings and portage routes during the operation phase by designing water crossings to meet requirements of the *Canadian Navigable Waters Act*.

Sensory disturbances caused by project activities would include change in the visual landscape, reduced air quality (through emissions of air contaminants such as dust, particulate matter, sulphur dioxide, nitrogen dioxide, acrolein, benzene, benzo(a)pyrene, hexavalent chromium, iron, and nickel) and elevated noise levels, and would disrupt the fishing experience and the sense of connection to the surroundings. To mitigate visual disturbances, the proponent committed to minimize clearing at shorelines and retain vegetation and landforms to block the view of the project from Indigenous users. To mitigate effects from reduced air quality and elevated noise levels, the proponent committed to implement speed limits on project vehicles; require routine equipment maintenance; limit vehicle and equipment idling; use dust suppression systems at aggregate sites; adhere to the construction specifications for dust suppressants under the Ontario Ministry of Transportation's Ontario Provincial Standard Specification 506; use noise-reducing equipment components; and apply best practices for blasting and other noise sources to meet Ontario's NPC-119 (for blasting) and NPC-300 (for stationary and transportation sources of noise emissions) guidelines. Further, IAAC recommends that the proponent halt or limit construction and maintenance activities during dry and high-wind conditions to reduce fugitive dust generation, schedule disruptive activities based on input from nearby Indigenous communities, monitor air quality and noise levels, and notify communities of when and where reduced air quality and elevated noise levels are expected to avoid or minimize exposure. IAAC also recommends that the proponent establish and implement a complaints resolution process to address sensory disturbance complaints from the land and resource users of the Indigenous communities.

The project could cause a reduction in the quality of the traditional fishing experience. The potential increased presence of persons fishing in traditional locations used by Indigenous communities would alter the fishing experience for the Indigenous communities through a change in ambiance and a perceived reduction in harvest success. To mitigate effects from the increased presence of persons, the proponent would discourage use of temporary work areas once they are no longer needed by using physical control measures such as revegetation, installation of barriers, and the removal of temporary crossings.

The project could result in vehicular accidents at locations that intersect with routes to fishing sites, as well as accidental spills of hazardous materials into the surrounding environment. These accidents would be emergency situations that could reduce safe access to harvesting sites and degrade the quality of harvesting experience in their vicinity. The mitigation measures for malfunctions and accidents described in Section 3.1.1 would also support the management of potential adverse effects on wildlife that support traditional harvesting activities, through control or containment of spill-related effects on aquatic and riparian environments where species of importance to Indigenous communities could be present. These measures would also address concerns from Indigenous communities about adverse effects to the quality of fish and quality of the traditional fishing experience (e.g., fish availability, access to fishing locations, and fishing experience) through fear of project-related water contamination.

For fishing, IAAC is of the view that, with the implementation of these mitigation measures, the project would cause limited residual effects through localized reductions, or perceived reductions, in fish availability, temporary localized reductions in access to fishing locations, as well as alter the sensory experience and ambiance of fishing by Indigenous communities. Fish would remain abundant in the LSA and RSA and Indigenous communities would continue to have access to sites used for fishing.

Hunting and Trapping

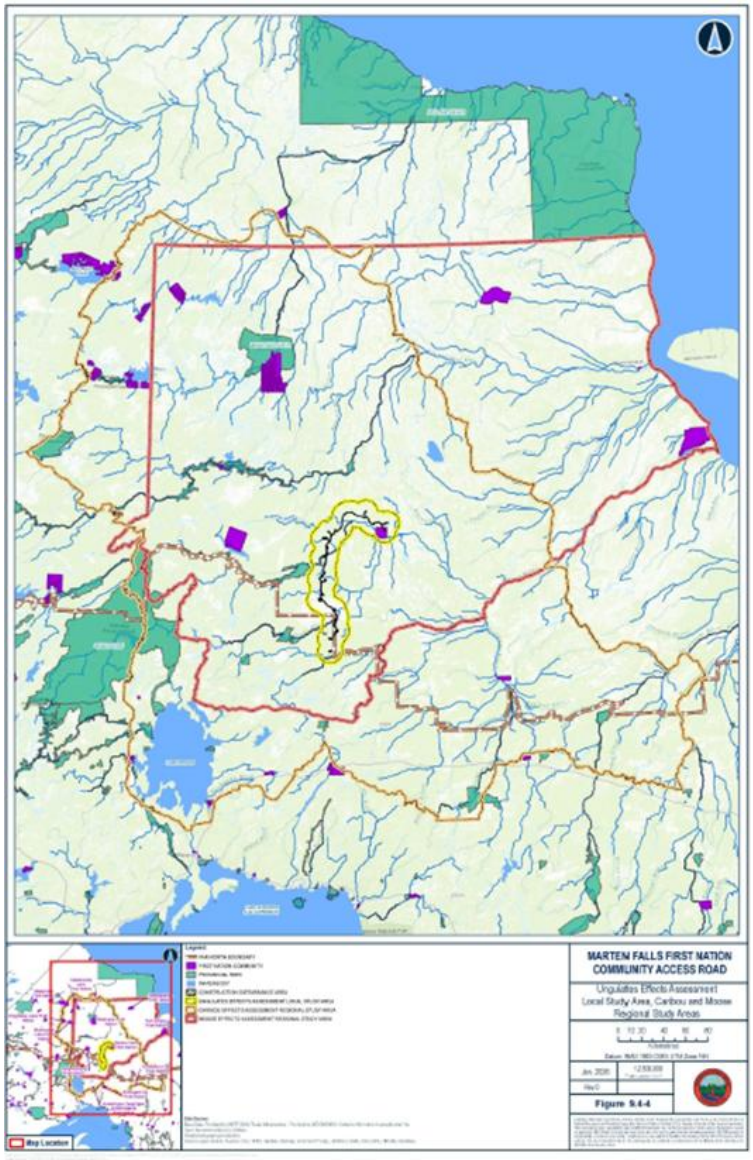
The project would result in changes to traditional hunting and trapping activities through a reduction, or perceived reduction, in caribou and other wildlife availability which would be displaced due to habitat loss in the CDA, increased in recreational hunting activity due to an increase in public access, and habitat alteration and degradation due to sensory disturbances such as elevated noise, light, dust and vibrations.

Construction and operation activities such as site clearing and grubbing to prepare the terrain for project components would reduce access to preferred areas for traditional practice as well as the quality of experience. Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Kitchenuhmaykoosib Inninuwug, Long Lake #58 First Nation, Marten Falls First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation have expressed concerns regarding potential for effects to hunting and trapping, including reduced opportunities or availability due to wildlife displacement caused by construction activities, effects to wildlife populations and health due to sensory disturbances, and the potential increase in recreational hunting.

IAAC considered effects on boreal and eastern migratory caribou, other ungulate species and wolverine in the CDA; the caribou LSA, defined as the area that extends 10 kilometres from the centreline on both sides of the proposed route plus a 500-metre buffer around each of the other project components where project effects may extend; and the caribou

RSA, defined as the Missisa, Nipigon, Ozhiski, and Pagwachuan caribou ranges. Figure Y depicts the LSA (area delineated in bright yellow) and RSA (area delineated in amber).

Figure 6: LSA and RSA for caribou, other ungulates



Source: Marten Falls Community Access Road Project Environmental Assessment Report/Impact Statement, Figure 9.4-4

IAAC assessed effects on game birds and furbearers (excluding wolverine, which was assessed within the caribou LSA and RSA) across three spatial areas: the CDA; the other wildlife LSA, defined as the area extending three kilometres on either side of the route

centreline plus a 500-metre buffer around other project components where project effects may occur; and the other wildlife RSA, which extends 11 kilometres on either side of the centreline (see Figure 3, Section 2.2).

Change in availability of caribou and other wildlife

Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Ginoogaming First Nation, Nibinamik First Nation and, and Weenusk First Nation raised concerns regarding loss or fragmentation and displacement of habitat that is important to traditional hunting practices during the construction phase. In addition, Attawapiskat First Nation raised concerns about the impact the construction and operation phases may have on caribou migration. With respect to caribou, the project would result in the loss, fragmentation and degradation of boreal and eastern migratory caribou habitat within the caribou LSA and portions of the RSA, including high-use habitat that could be used for calving/nursery areas (boreal caribou only), winter-use areas, and possible travel/migration corridors. The project would also alter, disrupt and restrict caribou movement across the caribou LSA as caribou are known to avoid areas of high anthropogenic activity and sensory disturbances (e.g., noise, vehicle activity, vibration, lighting), which in turn would reduce or alter traditional caribou harvesting areas. As a linear structure, the road corridor would also increase predation of caribou. Together, these effects in the CDA and caribou LSA would displace caribou farther into the caribou RSA and beyond the RSA for eastern migratory caribou, reduce connectivity between important habitats, and may alter movement and migration patterns within and between ranges and seasonal habitats. These changes may impact the availability of caribou within the caribou LSA.

The proponent indicated that the selected route corridor, compared to alternatives routes, reduced its overlap with high-use caribou habitat such as calving/nursery areas and travel corridors. To further mitigate effects from habitat loss, the proponent committed to minimizing overlap between project components and high-use caribou habitat where feasible; reduce vegetation clearing and undertake re-vegetation where feasible; and establish buffer zones around identified or confirmed key ecological features of high-use to caribou (e.g., known nursery areas). To mitigate effects from sensory disturbances, the proponent committed to avoid high-disturbance activities during sensitive periods, where practicable; implement noise, air emission, and equipment controls; and posting speed limits to reduce traffic-related disturbances during construction and maintenance activities.

IAAC also notes that the proponent would be subject to federal requirements, which would include permitting under SARA for adverse effects to caribou that may occur within the Marten Falls First Nation reserve, and to registerer or obtain a permit as applicable under Ontario's *Species Conservation Act, 2025* in relation to boreal caribou and/or their habitats on provincial land. ECCC and MECP both indicated that the proponent should consider offsetting measures for caribou. MECP further noted the potential to restore habitats within

the Missisa and/or Ozhiski ranges would be considered as part of the provincial environmental assessment and decision-making process. Based on information provided by ECCC and MECP, IAAC is of the view that changes in the distribution and movement patterns of caribou would result from the project.

With respect to other wildlife, the project would result in the direct loss of habitat for game birds, furbearers (including wolverine, listed as a species of concern under SARA and threatened under Ontario's *Species Conservation Act, 2025*, moose, and deer within the cleared right-of-way and in associated construction areas. This includes some forested upland habitat used by moose and American marten, wetland and riparian habitats used by beaver, muskrat, and other semi-aquatic furbearers, and mixed upland–wetland habitats used by game birds. In addition, habitat may become less suitable due to sensory disturbance (e.g., noise, vehicle activity, vibration, lighting) during both the construction and operation phases, which may cause certain species to avoid areas within and adjacent to the CDA. However, the proponent's modelling shows that, despite local losses, suitable habitat for these species remains abundant across the other wildlife RSA.

To mitigate effects on game birds, furbearers, moose, deer and other harvested wildlife the proponent committed to avoiding sensitive and high-use sites where feasible; limit vegetation clearing outside sensitive breeding periods, where practicable; apply buffer zones around wetlands, riparian habitats, and known wildlife features where feasible; re-vegetation of temporary cleared areas where appropriate; and implement speed limits, signage, and worker wildlife awareness training in areas where wildlife would be frequently observed.

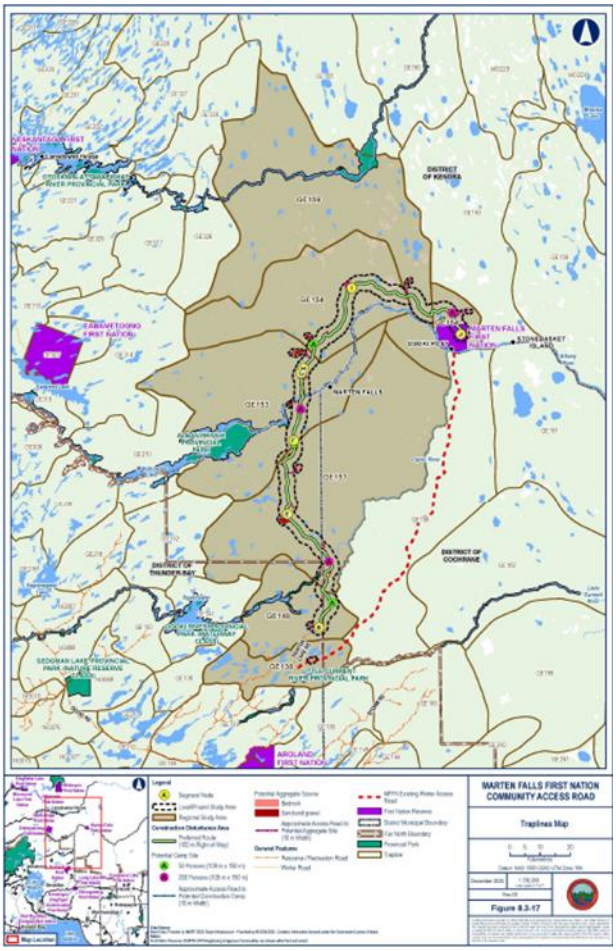
The proponent also committed to implementing monitoring programs, including remote cameras along the right-of-way and at reference sites to monitor disruptions to wildlife from the start of the construction phase through the operation phase of the project; and monitoring of species at risk. IAAC recommends that the proponent provide opportunities for Indigenous participation in its wildlife monitoring programs and share the results with Indigenous communities.

Change in access to hunting and trapping sites and quality of experience

The project would result in changes to access to traditional hunting and trapping sites due to changes to terrain and the installation of barriers (e.g. fences and gates) and change in access to registered trapline areas (GE 138, GE 148, GE 153 GE 154, GE 157, GE 159, and GE 164 shown in Figure 7), which would be overlapped partially by the CDA. It is IAAC's understanding that the overlap between traplines and the CDA is minimal. Aroland First Nation has also identified five trapline areas that intersect with the RSA. In addition, Aroland First Nation expressed concerns regarding the potential restrictions to access of hunting and trapping sites during important harvesting seasons. IAAC understands the road would provide new means to access areas of the traplines. To mitigate effects from

changes to access during construction and maintenance work, the proponent committed to keeping access routes to traditional harvesting areas open and unobstructed by creating temporary access roads or detours, where possible, to facilitate continued harvesting and use of trapline areas. Further, the proponent would provide notice to trapline holders on the timeline and periods of construction. The proponent also committed to scheduling construction activities to avoid peak harvesting periods.

Figure 7: Traplines within the RSA



Source: Marten Falls Community Access Road Project Environmental Assessment Report/Impact Statement, Section 8, Figure 8.3-17

The presence of non-resident project workers that may practice hunting would affect the quality of experience for Indigenous persons. To mitigate these effects, the proponent committed to implementing a firearms ban, prevent the use of recreational all-terrain vehicles within the other wildlife LSA, and prohibit hunting and harvesting of wildlife by on-site visitors and workers during the construction phase and periods of maintenance work,

except for the purpose of safely exercising or enabling the safe exercise of Indigenous rights. IAAC also notes that the mitigation measures for sensory disturbances described above (for addressing changes in caribou and other wildlife availability) would also mitigate the changes in the quality of hunting and trapping experience due to project-related sensory disturbances.

During operation, vehicular collisions with caribou and other ungulate species that use the CDA could result in their harm or death, while vehicular accidents at locations that intersect with hunting and traplines could reduce safe access to harvesting sites and degrade the quality of harvesting experience in the vicinity of the accident site. To mitigate these effects, the proponent has committed to consider vehicular collisions through project design and operation (e.g., guardrails, clear line of sight to adjacent habitat, posted speed limits, regular maintenance of project equipment and vehicles), and employee safety training (including driver safety and wildlife awareness training and procedures).

Animbiigoo Zaagi'igan Anishinaabek, Aroland First Nation, Attawapiskat First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Marten Falls First Nation, Neskantaga First Nation and Nibinamik First Nation have raised concerns regarding pressures on hunting that would occur from an increase in access for hunters to the area. IAAC also understands that Ontario's wildlife management framework, administered by MNR, manages fish and wildlife harvest at a landscape level (e.g., fisheries management zones and wildlife management units).

For hunting and trapping, IAAC is of the view that, with the implementation of these mitigation measures, the project would cause residual effects through lower wildlife availability or changes to experience at preferred locations of caribou and other wildlife that would be displaced within the caribou and other wildlife LSAs as well as through low disruptions to safe access and the potential for an increase of non-Indigenous hunters and trappers. Regional habitat availability and sustainable population levels for all wildlife would be maintained, and traditional hunting and trapping could continue within the caribou and other wildlife RSAs.

Plant Harvesting

The project would result in changes to plant harvesting through project activities such as removal of habitat due to clearing and grubbing to prepare the terrain for project components, drilling, blasting, and installing culverts. Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Ginoogaming First Nation, Kashechewan First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation have expressed concerns that the road would lead to the degradation and depletion of traditionally harvested plants. These communities are specifically concerned about fugitive dust and vehicle emissions smothering vegetation, the potential contamination of medicines by

herbicides, and the threat of invasive species introduced by increased traffic. The communities emphasize that the loss of these resources in culturally vital peatlands would directly impact their food security, traditional economies, and intergenerational transfer of traditional knowledge.

The project activities would potentially cause a reduction, or perceived reduction, in harvest success from vegetation degradation or removal and from the negative perception of the quality of plants within the CDA, less safe access to harvesting sites, and reduced quality of experience due to elevated noise levels from traffic and operating equipment. IAAC considered effects to plant harvesting the CDA; the plant harvesting LSA, defined as the area that extends three kilometres from the centreline on both sides of the proposed route plus a 500-metre buffer around each of the other project components; and the plant harvesting RSA, defined as the area that extends 11 kilometres on either side of the centreline within which cumulative effects may occur. The areas that represent the LSA and RSA are depicted in Figure 3 in Section 2.2.

Change in plant availability

Animbiigoo Zaagi'igan Anishinaabek and Marten Falls First Nation, has expressed concern over the loss of plant harvesting sites due to construction activities. The project is expected to require 60-metre width of vegetation clearing within the 100-metre right-of-way and associated, resulting in permanent loss of a portion of upland forest, peatlands, and riparian vegetation communities where plants of Indigenous importance occur. Although some disturbed areas would be allowed to naturally re-vegetate following construction, and much of the cleared corridor would remain in an altered state due to ongoing road use and maintenance. High-value harvesting areas for traditional use plant populations were identified at Patience Lake, the Albany River Corridor, and areas in between them. The Patience Lake and its surrounding area are used to gather berries, and species used as medicines such as spruce roots, while the Albany River Corridor and its tributaries are largely used for harvesting of sage and cranberry. A number of traditional use plants were found in peatland ecosystems which dominates the CDA, such as muskrat root. The species composition of the vegetation community may be affected by altered surface water drainage and runoff as a result of road construction in the CDA.

The proponent proposed mitigation measures to reduce adverse effects on vegetation, including limit clearing within the 100-metre right of way; minimize disturbance to sensitive ecosystems, such as wetlands and riparian areas; implement vegetation clearing and grubbing practices that support natural revegetation and progressive reclamation of temporary disturbance areas to allow disturbed areas to naturally revegetate over time; and conduct vegetation clearing in winter months where feasible to reduce soil disturbance and protect root systems.

Change in safe access and quality of plant harvesting experience

Site preparation (e.g., land clearing, grubbing and grading) would reduce access to plant harvesting sites near the CDA and cause sensory disturbances that would reduce the quality of plant harvesting experience. IAAC notes that the mitigation measures proposed to address changes in access to hunting and trapping areas, would be appropriate to mitigate effects from changes to safe access to plant harvesting areas.

IAAC also recognizes that Indigenous Peoples may perceive plants located near or within the CDA as no longer being of harvesting quality, which may result in plant harvesting activities moved to locations away from the CDA and further into the plant harvesting LSA. Aroland First Nation and Kashechewan First Nation, raised concerns regarding the impact of pesticides on plant harvesting. To mitigate effects from changes in the quality of experience to plant harvesting, the proponent committed to avoiding the use of herbicides for vegetation maintenance along the road and proposed to utilize mechanical removal or environmentally friendly products. The measures described above to limit degradation in the quality of fishing experience from sensory disturbance would be appropriate for addressing effects on the quality of plant harvesting experience as well.

Vehicular accidents at locations that intersect with routes to plant harvesting sites could reduce safe access to harvesting sites and degrade the quality of harvesting experience in the vicinity of the accident site. The mitigation measures relevant for addressing effects from collisions and accidental spills and described in Section 2.1.4 would support managing potential adverse effects on plants that support traditional harvesting. The measures would include restricting vehicular refueling and maintenance activities to a minimum of 30 metres from waterbodies to prevent spillage, adhering to effluent limits and having in place a spill prevention and response plan at work locations with measures to control or contain spill-related effects on aquatic and riparian environments where plant species of importance to Indigenous communities could be present.

For plant harvesting, IAAC is of the view that, with the implementation of these mitigation measures, the project would result in a localized reduction, or perceived reduction, in harvest success through vegetation loss in the CDA and changes to how Indigenous Peoples could access plant harvesting locations near the CDA. Harvesting activities would continue as the vegetation communities would remain abundant in the LSA and RSA.

4.3.1.2 Residual effects

Based on the above assessment, IAAC is of the view that the project would likely result in residual adverse effects to the current use of lands and resources for traditional purposes by Indigenous Peoples. The route corridor would intersect with fishing, hunting, trapping and plant harvesting locations, which would cause changes to resource availability or perceived availability, safe access and quality of experience for the Indigenous persons who practice traditional activities near or within the CDA.

The residual effects, taking into account the mitigation measures described above, would be moderate in magnitude, geographic extent and timing, as wildlife displacement, sensory disturbance and decreased harvest success or quality in proximity to the CDA would displace traditional activities from the CDA into the respective LSAs or beyond, notably for hunting, throughout the harvesting seasons. The effects would be high in duration and frequency as well as irreversible. The effects would occasionally interact with the historical context of communities, depending on success and enjoyment during instances of traditional practices. The level of uncertainty would be moderate, as the cause-and-effect relationship between the project and traditional activities are not fully understood. Further, input on specific sites of importance for traditional use was not available for all Indigenous communities. Despite this, the traditional activities are expected to continue.

IAAC concludes that the residual adverse effects on the current use of lands and resources for traditional purposes by Indigenous Peoples are likely to be significant to a low extent.

4.3.1.3 Cumulative effects

The residual adverse effects of the project on the current use of lands and resources for traditional purposes by Indigenous Peoples, in combination with other past, present, and reasonably foreseeable projects, are likely to have cumulative effects through changes to resource availability, safe access to traditional harvesting sites, quality of experience and pressures from increased access by non-Indigenous persons. Effects from the proposed Webequie Supply Road Project, the proposed Northern Road Link Project, the proposed Anaconda and Painter Lake Roads Upgrade Project, the Rapid Lynx Broadband Project and mineral exploration followed by mining at the proposed Eagle's Nest site have the potential to interact with the residual adverse effects from the project in relation to clearing and grubbing activities, sensory disturbances from construction equipment and increased traffic, and changes to safe access of harvesting sites. These interactions would increase access to the area and may enable additional infrastructure development which, together, would increase pressures on resources and reduced the quality of experience when practicing traditional activities.

IAAC notes that federal and provincial legislative frameworks would apply to manage the effects of the projects on fish and terrestrial wildlife. The Government of Ontario has legislative authority for wildlife management and decisions with respect to natural resources, and leads conservation initiatives for caribou in the province. In 2022, Canada and Ontario entered into a five-year conservation agreement under section 11 of SARA through which they agree to cooperate in the delivery of the conservation measures laid out in the agreement in a manner that minimizes duplication, maximizes efficiency, and respects each other's roles and responsibilities. The conservation measures laid out in the agreement are intended to support the long-term recovery of boreal caribou at the

landscape-level. IAAC considers that existing applicable frameworks as well as the project-specific mitigation measures recommended in Section 4.3.1.4 would contribute to address the cumulative effects of the project on current use of lands and resources for traditional purposes.

IAAC is of the view that, taking into account mitigation measures, cumulative effects on fishing, plant harvesting, as well as hunting and trapping of small terrestrial wildlife would be limited, while effects on hunting of larger wildlife from the other projects are likely to be additive with the residual effects from the proposed project.

Cumulative effects on hunting of caribou and other ungulates would be moderate in magnitude, primarily through changes in movement patterns affecting their availability for hunting, particularly caribou, as ECCC and MECP noted that effects from the projects would further alter movement patterns through the RSA. The timing, frequency and duration for the cumulative adverse effects would be of a high extent as a reduced harvesting success is expected to occur throughout the harvesting periods from the project with a further reduction as more development occurs within the Ring Fire area. The effects would be irreversible. Despite this, the traditional activities could continue within the respective RSAs. The project's contribution to cumulative effects on traditional caribou hunting is expected to be of a similar extent as that of other proposed projects in the region, with ECCC noting that cumulative effects to caribou and caribou habitat may be significant despite mitigation, and MECP noting that, although cumulative disturbance within the Missisa Range would increase, overall disturbance is expected to remain below the 35% threshold identified in the federal recovery strategy.

Cumulative effects on wolverine are also anticipated due to a loss of habitat connectivity, and increased mortality due to a combination of increased access and incidental harvest. These effects would likely persist despite the proposed mitigation measures and the relative abundance of suitable habitat in the RSA. Despite this, the traditional activities that include wolverine could continue within the RSA.

IAAC concludes that cumulative effects to the current use of lands and resources for traditional purposes by Indigenous Peoples by the project in combination with other projects is likely to be significant to a low extent for traditional harvesting activities, except for hunting of ungulates, particularly caribou, which is likely to be significant to a moderate extent due to changes in resource availability that would result from the project and other foreseeable projects, together, altering movement patterns and range areas.

4.3.1.4 IAAC's recommended mitigation measures and follow-up program measure pertaining to effects to the current use of lands and resources for traditional purposes by Indigenous Peoples

Mitigation Measures

Recommended mitigation measures that would potentially be included as a condition in the impact assessment decision statement include:
Establish and implement a complaints resolution process to receive and address sensory disturbance complaints and notify the Indigenous communities on how the process works to receive and address their complaints.
Reduce sensory disturbance, and where feasible minimize terrestrial vegetation clearing and undertake re-vegetation during project construction and maintenance, specifically: • halt or restrict project activities during periods of dry and high-wind conditions; • schedule project activities expected to reduce air quality and elevate noise levels in consideration of input from nearby Indigenous communities; • notify Indigenous communities when and where reduced air quality and elevated noise levels are expected to occur to avoid or minimize exposure; • limit vegetation clearing and conduct this project activity outside sensitive breeding periods (i.e., winter months) for game birds, furbearers, moose, caribou, and other harvested wildlife; • avoid herbicides for vegetation clearing, unless mechanical and manual ways of vegetation removal are not feasible; and • conduct progressive reclamation of areas temporarily disturbed by the project to progressively return them to a state as close as possible to, or better than, baseline once they are no longer required for the project, including identify plant species of interest in consultation with Indigenous communities for use in establishing self-sustaining vegetation communities.
Establish and delineate, under the direction of qualified individuals, setbacks and buffer zones around wetlands, riparian habitats, and known wildlife features and seasonal habitats (e.g., nursing areas and dens) for game birds, furbearers, moose, caribou, and other harvested wildlife.
Provide opportunities for Marten Falls First Nation and Indigenous communities to harvest plants prior to vegetation clearing near known harvesting sites on Marten Falls First Nation reserve and on non-federal lands within the LSA respectively.
Ensure project employees and contractors are trained on wildlife awareness.
Recommended mitigation measures that would potentially be ensured by the Government of Ontario:
Prohibit project employees and contractors while on shift or at construction camps, from: • hunting, trapping, and plant gathering; • keeping and using firearms; and

• using recreational all-terrain vehicles, with the exception of project-related activities.
Restrict access to project employees and contractors on non-federal lands within the LSA, in consultation with relevant provincial authorities, to the LSA to mitigate adverse federal effects on the current use of lands and resources for traditional purposes.
Minimize interruption to waterway navigation by: • establishing a restricted work zone that would be accessible only by project workers to protect the safety of waterway users from the in-water construction and maintenance work; • notifying Marten Falls First Nation and Indigenous communities when in-water works would occur on Marten Falls First Nation reserve and on non-federal lands within the LSA respectively; • posting notices and signage in advance; and • providing safe detours and direction to waterway users.
Install restrictive fencing and/or barricades near waterbody crossing sites, including on bridge structures, to deter fishing during the construction phase and periods of maintenance work during the operation phase.
Maintain equipment in an operating condition that prevents unnecessary noise, including but not limited to non-defective muffler systems, properly secured components, and the lubrication of moving parts. Restricting idling of equipment to the minimum necessary to perform the specified work.
Implement best practices for blasting during construction and maintenance activities.
Refer to measures in Section 2.1.4 related to collisions and accidental spills, and to Section 4.3.3 of this report for measures related to vehicle speed limits.

Follow-up Program Measures

Recommended follow-up program measure that would potentially be included as a condition in the impact assessment decision statement include:
Monitor effects to wildlife species of importance to Indigenous communities for traditional purposes, in consultation with Marten Falls First Nation for monitoring on Marten Falls First Nation reserve and with Indigenous communities and relevant authorities for monitoring on non-federal lands within the LSA, including relevant predator-prey dynamics, the monitoring methods, indicators and thresholds to guide adaptive management, including the implementation of any additional or modified mitigation measures and make the monitoring results available to Indigenous communities, as soon as feasible.
Monitor and report on air contaminants emitted during project construction, including levels of dust, particulate matter 10, particulate matter 2.5, diesel particulate matter,

sulphur dioxide, nitrogen dioxide, acrolein, benzene, benzo(a)pyrene, hexavalent chromium, iron, and nickel, as well as noise levels, on Marten Falls First Nation reserve and implement additional or modified mitigation measures if monitoring shows exceedances of health-based thresholds for air contaminants, including thresholds in the Canadian Air Quality Standards, or Ontario's AAQC, whichever is more protective of human health, or noise thresholds as well as notify Indigenous communities, and make the monitoring results available to Indigenous communities, as soon as feasible.

4.3.2 Effects on structures, sites or things of historical, archaeological, or architectural significance to Indigenous Peoples and effects on physical and cultural heritage

The project is likely to cause residual and cumulative adverse effects on structures, sites or things of historical, archaeological, or architectural significance to Indigenous Peoples through physical damage or degradation of sites of importance (i.e., travel routes; harvesting sites; cultural, spiritual, and ceremonial sites; and burial sites), and change to safe access to portions of some sites of importance (i.e., travel routes). Additionally, the project is likely to cause residual and cumulative adverse effects on physical and cultural heritage from changes in the quality of experience of Indigenous persons due to sensory disturbances when at, or enroute to, the sites.

With the implementation of the mitigation measures identified in Section 4.3.2.4, IAAC is of the view that residual adverse effects to structures, sites or things of historical, archaeological, or architectural significance to Indigenous Peoples, as well as the residual adverse effects to physical and cultural heritage, are likely to be significant to a low extent, while the cumulative effects of the project in combination with other physical activities are also likely to be significant to a low extent.

IAAC's assessment of effects to structures, sites or things of historical, archaeological or architectural significance to Indigenous Peoples focused on damage or degradation to sites of importance and change in safe access to those sites. The assessment of effects to physical and cultural heritage focused on change in experience from sensory disturbances perceived by Indigenous persons when at or near the sites of importance. IAAC considered information from the proponent's Impact Statement and concerns raised by Aroland First Nation, Fort Albany First Nation, Ebametoong First Nation, Ginoogaming

First Nation, Long Lake #58 First Nation, Métis Nation of Ontario, Nibinamik First Nation, and Weenusk First Nation about potential damage or loss of access to important sites and archaeological resources.

Sites of importance identified include travel routes; hunting, fishing, trapping and plant harvesting sites; cultural, spiritual and ceremonial sites; burial sites; and areas of archaeological potential.

IAAC considered effects to structures, sites or things of historical, archaeological, or architectural significance to Indigenous Peoples and effects to physical and cultural heritage from the project that would occur within the CDA, LSA and RSA. The LSA extends 2.5 kilometres from the centerline on both sides of the proposed route plus a 500-metre buffer around each of the other project components while the RSA extends five kilometres from the boundary of the LSA. IAAC's effects assessment focuses on the LSA as effects are expected to be localized.

4.3.2.1 Assessment of effects

Sites of importance

Damage or degradation to sites of importance

Aroland First Nation, Long Lake #58 First Nation, Métis Nation of Ontario and Neskantaga First Nation expressed concerns regarding damage or loss to archaeological findings of importance to communities. Also, Métis Nation of Ontario expressed an interest in Métis archaeology and an expectation that archaeological findings of importance to Indigenous Peoples are protected. Project activities during the construction and operation phases, such as clearing and grubbing to prepare the terrain for project components (e.g., road right-of-way, access roads and construction staging areas), installing temporary supportive infrastructure such as access roads and water crossings (e.g., culverts and bridges), and developing and operating aggregate sites would cause environmental changes that could damage or degrade harvesting sites and areas of archaeological potential.

Mitigation to address the environmental effects to harvesting sites are described in Section 4.3.2.4 of this report and would be adequate to mitigate the potential damage or degradation of harvesting sites of importance to Indigenous Peoples.

Project activities such as clearing and grubbing to prepare the terrain for project components (e.g., road right-of-way, access roads and construction staging areas), developing pits and quarries at aggregate sites, and conducting maintenance or refurbishment of water crossings would change the terrain or landscape, and may alter or disturb shorelines in areas with archeological potential.

Regarding areas of archaeological potential, it is IAAC's understanding that identification of locations of archaeological potential and discovery of archaeological artifacts has and would likely continue to occur in the CDA during project construction or when conducting maintenance work during the operation phase. The proponent identified a campsite of potential cultural heritage value that has artifacts. The site is called Caviar Site (Eilp-1) and is located at the proposed Albany River water crossing along the proposed route. The proponent's Stage 2 Archeological Assessment resulted in the discovery of artifacts found at the site which included items such as a bottle pump, outhouse structure, cooking areas, etc. Based on the findings in the Stage 2 Archaeological Assessment a Stage 3 Archaeological Assessment is required under the Ontario Heritage Act to determine the extent and status of the site, and to make recommendations for mitigation, which would be carried out through a Stage 4 Archaeological Assessment. Archaeological Assessments would be undertaken by a licensed consultant archaeologist as early as possible during detailed design and prior to any ground disturbing activities.

The Ontario Ministry of Citizenship and Multiculturalism further indicated that if previously undocumented archaeological resources are discovered during construction, the resources may be a new archaeological site and therefore subject to section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and contact a licensed archaeologist to carry out an archaeological assessment as required under the *Ontario Heritage Act*.

The environmental changes caused by the project may damage or degrade archeological artifacts encountered in those areas. To mitigate effects on encountered artifacts, the proponent committed to establishing a construction monitoring process that includes procedures and "no-go" zones to avoid impacts to areas with archeological potential. The proponent also committed to training construction personnel on procedures to follow when working in locations with potential for encountering archeological resources of heritage value. Accidental spills during storage, transportation, handling and dispensing of hazardous materials, from vehicle accidents or mechanical malfunctions during the construction and operation phases could degrade sites of importance and archaeological resources at or near the accident site. In addition, accidental collisions with machinery or vehicles could cause damage to archaeological resources within the CDA and LSA. Mitigation measures proposed by the proponent that would be applicable are described in Section 2.1.4. IAAC further recommends that the proponent create and put in place an Indigenous Communities Communication Plan for accidents and malfunctions, within six months of issuance of the decision statement, and maintain the plan throughout the life of the project. The plan would identify when and how Indigenous communities would be notified of impacts on sites of importance to Indigenous communities, including as a result of potential malfunction and accident scenarios, and the actions taken to respond.

IAAC is of the view that, with the implementation of these mitigation measures, residual adverse effects of the project on sites of importance through partial damage or degradation would be limited, while archaeological resources would be preserved.

Safe access to sites of importance

IAAC's assessment of effects to structures, sites or things of significance to Indigenous Peoples included the consideration of potential damage or degradation to historic trails and change in access to the trails and use of them by Indigenous Peoples, and considered information from the proponent's Impact Statement and concerns raised by Ebametoong First Nation, Ginoogaming First Nation, Kashechewan First Nation and Neskantaga First Nation, and Weenusk First Nation about potential damage or loss of access to trails.

Neskantaga First Nation expressed concern regarding the project's intersections with two trails used by the community that hold heritage value. According to the proponent's Impact Statement, impacts to five historic trails would occur in the CDA during project construction and the operation phase. It is IAAC's understanding that the road would pass through a single location of each trail along the northern part of the proposed route. To identify appropriate measures to minimize impacts to trails of heritage value, the proponent committed to conducting a further assessment of identified trails to determine their heritage value and the appropriate mitigation measures to protect their value.

To minimize adverse effects to these trails (and any discovered sites), the proponent committed to establishing a construction monitoring process that includes procedures and "no-go" zones to avoid impacts to heritage landscapes, confining construction activities to the right-of-way of the proposed route, training construction personnel on the procedures to follow when working in locations with potential heritage value, and providing cultural awareness and sensitivity training to its workers to minimize the risk of workers causing damage or disruption to sacred sites. In addition, the proponent would implement an Environmental Protection Plan which would include mitigation measures to address traffic concerns including, traffic control measures (such as signage and barriers), communication of road closures or detours, and implementing speed limits for workers during the construction phase and maintenance work. Also, the proponent has committed to incorporating traditional ecological knowledge into the road design and maintenance plan to limit adverse disruptions to sites of value to Indigenous communities, including use of the sites by community members.

Road accidents could involve Indigenous persons accessing sites of importance near the road and appropriate mitigation measures are described in Sections 2.1.4.

IAAC is of the view that, with the implementation of these mitigation measures, residual adverse effects of the project on safe access to sites of importance would occur where the road intersects with travel routes used to access sites of importance. While Indigenous

communities would still be able to access sites of importance using the travel routes, they would be required to cross the road, reducing safe access.

Physical and cultural heritage

Aroland First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Long Lake #58 First Nation, Marten Falls First Nation, and Neskantaga First Nation have expressed concerns regarding the Albany and Ogoki Rivers as these rivers are considered culturally important heritage landscapes that hold deep cultural and spiritual meaning. Ginoogaming First Nation expressed concerns regarding the potential for disturbance to sacred sites and burial grounds identified near the CDA. Neskantaga First Nation in particular expresses concern for potential impacts to cultural, spiritual and sacred sites within the LSA. Further, Fort Albany First Nation and Long Lake #58 First Nation have expressed concerns regarding potential impacts to burial grounds. It Is IAAC's understanding that through archeological assessments and through the outcome of an alternatives assessment on route alignment conducted by the proponent, the CDA of the project would not intersect with any known burial sites. Therefore, IAAC understands that sites of importance with physical and cultural value would be impacted by the project only through sensory disturbances.

Aroland First Nation, Kashechewan First Nation, and Marten Falls First Nation have expressed concerns for the impact to the experience on the land due to visual and auditory environmental changes. Sensory disturbance from project activities during the construction and operation phases, including visual changes to the landscape, and reduced air quality and elevated noise levels at previously undisturbed culturally sensitive sites during project construction and maintenance work, as well as noise from traffic at sites located near the CDA, would disrupt or impede cultural practices at culturally important sites (burial, ceremonial and sacred sites). As such, these sensory disturbances would adversely affect intangible cultural heritage, including cultural identity and continuity of experience of Indigenous Peoples using the land.

Mitigation measures for changes to the quality of fishing experience and visual changes to the landscape, as described in Section 4.3.1.4, would be appropriate to mitigate effects on physical and cultural heritage.

With respect to physical and cultural heritage, IAAC is of the view that, with the implementation of these mitigation measures, residual adverse effects of the project on cultural activities carried out within and near the CDA would remain. Indigenous communities would still be able to experience the land, and cultural identity and practices could be maintained, however, the project would create a less tranquil experience for Indigenous persons on the land.

4.3.2.2 Residual effects

Based on the above assessment, IAAC is of the view that the project may result in residual adverse effects to structures, sites or things of historical, archaeological, or architectural significance to Indigenous Peoples and physical and cultural heritage as the proposed route would intersect with sites of importance and would damage or degrade segments of these sites, reduce safe access to impacted areas and degrade the experience at locations where the sites of importance would intersect with the road.

Structures, sites, or things of historical, archaeological, or architectural significance

The residual effects on structures, sites, or things of historical, archaeological, or architectural significance, taking into account the mitigation measures described above, would be moderate in magnitude as partial damage or degradation of sites of importance would occur but appreciation and use of the sites and any encountered archaeological resources would be maintained. Geographic extent, timing and frequency would be low to moderate, as the physical damage would occur within the CDA while degradation of the quality of experience at sites within the LSA may occur during site visits. Duration and reversibility are expected to be high as changes to access at points of intersection with the road would be permanent. Uncertainty is low as the cause-and-effect relationships and the recommended mitigation measures are well understood. The effects would have limited interactions with cultural practices, social values and ecological systems since Indigenous Peoples would not lose access to the sites or any encountered archaeological resources.

IAAC concludes that the residual adverse effects of the project on structures, sites or things of historical, archaeological, or architectural significance to Indigenous Peoples are likely to be significant to a low extent.

Physical and cultural heritage

With the implementation of the proposed mitigation measures and the proponent's commitments to address accidents and malfunctions, the residual adverse effects to physical and cultural heritage would be moderate in magnitude and geographic extent as partial degradation of sites of importance would change the experience of Indigenous persons visiting those sites within the LSA. In addition, timing and frequency are expected to be moderate as changes to sensory experience are expected to happen for Indigenous persons that access partially degraded sites of importance. Duration and reversibility would be of high extent as the degradation of the in sensory experience from the partial degradation of sites would also be permanent. Effects to sites of importance would have a limited impact on the resilience of Indigenous communities and their ability to experience the sites of importance could continue. The level of uncertainty would be low as the cause-and–effect relationship and mitigation measures are well understood. Though the required mitigation measures would not eliminate the effects on experience due to sensory disturbances, the value of the sites of importance to the Indigenous communities should remain.

IAAC concludes that the residual adverse effects of the project on physical and cultural heritage are likely to be significant to a low extent.

4.3.2.3 Cumulative effects

The residual adverse effects of the project on structures, sites, or things of historical, archaeological, or architectural significance, as well as on physical and cultural heritage, in combination with other past, present, and reasonably foreseeable projects, are likely to have cumulative effects. IAAC considered a spatial area similar to the proponent's caribou and other ungulates LSA and RSAs (see Figure 6 in Section 4.2.1, which captures where the likely residual effects of the project would interact with the likely effects of the proposed Webequie Supply Road, Northern Road Link, and Eagle's Nest projects, including through site clearing and grubbing activities conducted during their construction and operation phases, which may result in the partial damage or degradation of sites of importance and changes to the quality of experience of Indigenous persons engaging in traditional practices at these sites through sensory disturbances from operating equipment and traffic that would interact with the residual effects from the proposed project.

The same legislative mechanisms that would mitigate effects from the project on structures, sites, or things of historical, archaeological, or architectural significance, as well as on physical and cultural heritage, would apply to these other projects and would limit potential changes to the aquatic environment and terrain that would cause adverse effects to sites of importance to Indigenous Peoples and any encountered archaeological resources, as well as sensory disturbances that would affect the quality of experience, such that temporal and spatial overlaps in effects would also be limited.

Given that the interaction of project effects with the effects from other projects would be limited, IAAC does not recommend further mitigation measures or a follow-up program related to cumulative effects.

Structures, sites, or things of historical, archaeological, or architectural significance

Taking into consideration the recommended mitigation measures in Section 4.3.2.4 below, the likely cumulative effects on structures, sites, or things of historical, archaeological, or architectural significance would be moderate in magnitude as partial degradation of multiple sites could occur. The geographic extent, timing and frequency of cumulative effects would be low as changes to sites of importance would be limited to the disturbed areas near each project with the exception of interactions during periods of maintenance work. Duration would be high as partial degradation to sites of importance would be continuous and irreversible. Indigenous communities would continue to have access to sites of importance. Uncertainty is low as the cause-and-effect relationships and mitigation measures under applicable legislative mechanisms are well understood. The project's

contribution to these cumulative effects on sites of importance would be small relative to the contributions of other foreseeable projects.

IAAC concludes that cumulative effects to structures, sites, or things of historical, archaeological, architectural significance to Indigenous Peoples would be significant to a low extent as the project, along with other projects, would contribute to the partial degradation and reduced safe access of sites of importance to Indigenous communities.

Physical and cultural heritage

Taking into consideration the recommended mitigation measures in Section 4.3.2.4 below, the likely cumulative effects on physical and cultural heritage would be moderate in magnitude as the quality of experience would be altered by visual changes resulting from physical degradation of travel routes and other sensory disturbances from operating equipment and any nearby traffic that may disturb persons visiting culturally important sites , while heritage resource value would be maintained. The geographic extent would be moderate as effects from each project are expected to be localized to the respective projects. Timing and frequency would be moderate as sensory changes are expected to occur on occasion when Indigenous persons would access the sites of importance. Duration would be high as changes would be continuous and irreversible. The effect would have limited interactions with the social values of the Indigenous communities and the existing ecological systems as Indigenous communities' ability to visit and experience the sites would be maintained.

IAAC concludes that cumulative effects on physical and cultural heritage is likely to be significant to a low extent as the project, along with other projects, would change the experience of heritage value at culturally important site to Indigenous communities.

4.3.2.4 IAAC's recommended mitigation measures pertaining to structures, sites and things of importance.

Recommended mitigation measures that would potentially be included as conditions in the impact assessment decision statement include:
Plan and undertake construction activities to avoid impacts by informing project personnel of the locations of potential archaeological resources.
Determine the sites and areas of importance where work shall not be conducted. In doing so: • provide the opportunity for Indigenous groups to provide information on the sites and areas of importance.
Implement the following mitigation measures to protect and manage chance finds for any previously unidentified structures, sites or things of historical, archaeological, paleontological or architectural significance discovered within the CDA:

• immediately halt work at the location of a discovery; • delineate an area around a discovery as a no-work zone; • notify Indigenous communities and IAAC within 24 hours of a discovery and allow Indigenous communities to monitor archaeological works; and • develop mandatory training on chance finds, which includes the identification of sensitive locations within the project CDA and the implementation of the above measures, and deliver this training to all employees and contractors associated with the project.
Implement an Indigenous Communities Communication Plan that: • identifies when and how Indigenous communities would be notified of impacts on sites of importance to Indigenous communities, including as a result of potential malfunction and accident scenarios; and • provides opportunities for Indigenous communities to assist in the response efforts to address the impacts related to these identified malfunction and accident scenarios.
Refer to measures in Section 4.3.1.4, related to sensory disturbances at harvesting sites.

4.3.3 Effects on the health, social and economic conditions of Indigenous Peoples

The project is likely to cause residual and cumulative adverse effects on the health, social and economic conditions of Indigenous Peoples, mainly through the strain placed on social infrastructure and the ability to pass on Indigenous Knowledge. With the implementation of the mitigation measures identified in Section 4.3.3.4, IAAC is of the view that residual adverse effects on the health, social and economic conditions of Indigenous Peoples would likely be significant to a moderate extent as existing infrastructure of Indigenous communities would be further strained and the cumulative effects of the project in combination with other physical activities are also likely to be significant to a moderate extent given the ease of access and means of influence to the remote Indigenous communities.

IAAC assessed the effects to Indigenous peoples' health from the project's air emissions, noise, risk from road traffic, and from consumption of potentially contaminated country foods. IAAC also assessed effects to the social infrastructure, which serves as the backbone for social capital, trust, and resilience within a society, including education,

health care, and justice that support a community's quality of life and overall community well-being. In its assessment, IAAC has considered the unique identity and cultural needs of the Indigenous communities.

Indigenous communities in the area face challenges in maintaining adequate social infrastructure due to the remoteness of the communities and the impacts of colonialism. IAAC focused its assessment on how the project could further strain Marten Falls First Nation and neighbouring communities overburdened social infrastructures, as well as the unique pressures on emergency response services and traditional practices. Elements considered as contributing to the added strain include the influx of a transient workforce, increased accessibility of the land, increased risk of illegal or prohibited substances entering the community, concerns regarding public and road safety, and potential effects on cultural continuity and traditional practices.

IAAC considered effects from the project that would occur in the LSA and the RSA. The LSA is the area where changes to community health and socio-economic conditions due to the project are likely to occur and includes Marten Falls First Nation and Aroland First Nation. The RSA includes the following communities identified in the IEPP: Animbiigoo Zaagi'igan Anishinaabek, Attawapiskat First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Kitchenuhmaykoosib Inninuwug, Long Lake #58 First Nation, Mishkeegogamang First Nation, Neskantaga First Nation, Nibinamik First Nation, and Weenusk First Nation. IAAC's assessment relies on the limited community-specific information that was available at the time this report was prepared.

4.3.3.1 Assessment of effects

Changes to health condition

Health risk from project-related air emissions and noise

Animbiigoo Zaagi'igan Anishinaabek, Aroland First Nation, Constance Lake First Nation, Fort Albany First Nation, Ginoogaming First Nation, and Marten Falls First Nation raised health risks due to project activities during the construction and operation phases, such as operating heavy machinery and vehicles, drilling and blasting within the CDA, including construction activity on Marten Falls First Nation reserve, everyday road traffic and handling of aggregate material which could expose community members to air contaminants (e.g., exhaust and particulate dust emissions) and increased noise levels. As described in Section 2.3, the proponent has predicted potential exceedances to air quality on the reserve land during operations, however, there is no sensitive receptors identified near this location, therefore, limiting exposure to Indigenous peoples.

The measures described to address change in quality of fishing experience in Section 4.3.1.4 would be appropriate to mitigate health risk from air emissions and elevated noise levels.

IAAC is of the view that, with the implementation of these mitigation measures, residual effects of the project on human health risk from exposure to air contaminants and noise are not likely.

Health risk from road traffic

As raised by raised by Animbiigoo Zaagi'igan Anishinaabek, Aroland First Nation, Constance Lake First Nation, Ginoogaming First Nation, Long Lake #58 First Nation and Marten Falls First Nation, traffic poses a risk to personal safety throughout the life of the project. During project construction, the proponent anticipates an increase in winter road traffic as contractors drop off supplies and personnel, which could increase stress levels for commuters and pose road safety risk. The proponent has proposed to develop and implement an equipment mobilization plan with both Marten Falls First Nation and Aroland First Nation to mitigate the adverse project-related changes to traffic safety by separating construction traffic from community traffic. The plan would include a communications strategy to inform the communities of the mobilization schedule (i.e., periods of increased construction traffic on the winter road).

During the operation phase, traffic could impact personal safety of Indigenous community members through potential road accidents, whether they are traveling in a vehicle or accessing nearby sites for traditional practices. The proponent committed to comply with the Ontario Ministry of Transportation's Roadside Design Manual and to include adequate roadside safety elements, as well as post speed limits. The proponent is also considering pull outs and rest areas at regular intervals and the use of Indigenous languages on road signs to enhance safety, as well as, looking at alternatives to road salt to minimize attracting wildlife and subsequently the potential for vehicle-wildlife collisions. In addition, IAAC understands that the Ontario Ministry of Transportation would require the project to meet the relevant standard specifications for roads of the Ontario Provincial Standards organization, to help reduce accident risks.

IAAC is of the view that, with the implementation of these mitigation measures and applicable design standards and guidance, health risk from road traffic would be limited.

Risk of consuming potentially contaminated country foods

Animbiigoo Zaagi'igan Anishinaabek, Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Nibinamik First Nation, Webequie First Nation and Weenusk First Nation

expressed concern about potential risks to health from impacts on traditional food sources resulting from project activities, such as in-water works. Specifically, methylmercury was identified as a concern by Aroland First Nation, Attawapiskat First Nation, Fort Albany First Nation, Kashechewan First Nation and Nibinamik First Nation. Contaminants, including methylmercury, may bioaccumulate in fish, presenting a risk to safe consumption of fish or reluctance to consume fish.

The proponent indicated that parts of the road over peatlands would be constructed as a floating road keeping peat in place while promoting natural water flow, by adding a permeable embankment over the pit, supported by heavy geogrid to prevent clogging and allow settlement. The parts over peatlands are where changes to hydrology during construction or operation — especially following extreme rainfall — could cause groundwater impoundment or periodic surface flooding. These anoxic conditions could enhance methylmercury generation and increase its release into groundwater or surface water. In-water works could resuspend sediments or introduce contaminants from surface aggregate, increasing the microbial formation and downstream transport of methylmercury.

Changes in water quality resulting from the project, including recommended mitigation measures, are described in Section 2.1. The proponent stated that the road design, which includes a gravel base and including equalization culverts, would not change the hydrological conditions of the peatlands. However, ECCC, Wildlife Conservation Society (WCS) Canada, Constance Lake First Nation, Nibinamik First Nation, and Weenusk First Nation, expressed uncertainty that the floating road design would maintain hydrological conditions of the peatland. IAAC acknowledges that this uncertainty may lead to a reluctance to harvest and consume country foods, possibly leading to food insecurity and reduced community health, even if water quality does not change as a result of the project. As such, IAAC recommends that long-term water quality monitoring in areas where country foods are harvested include methylmercury until a three-year trend analysis demonstrates the project is unlikely to generate or transport methylmercury, in consideration of the views from Indigenous communities on monitoring design and analysis. Further, IAAC recommends that the monitoring results, which includes a requirement to monitor for methylmercury, are shared with the Indigenous communities in a manner that shows any changes from baseline conditions (see Section 2.1.4.1 and Section 4.3.2.4).

In addition, the Fish Contaminant Monitoring Program, run by MECP, collects information on contaminants in fish from various testing locations and uses this information to produce fish consumption advisories. Fish consumption advisories are available at Guide to Eating Ontario Fish | ontario.ca and Guide to Eating Ontario Fish: Advisory Database - Dataset - Ontario Data Catalogue, and data on contaminant levels in fish are available at Fish Contaminants - Dataset - Ontario Data Catalogue. IAAC understands that the program has some testing locations in the Far North, with the nearest to the project located at

Wabimeig Lake (east of the project, in the Muswabik River – Upper Albany River tertiary watershed), which is within the fish and fish habitat RSA, with additional locations along the Albany River.

IAAC is of the view that, given the project design and with the implementation of the mitigation measures described in Section 2.1, residual effects from changes to health conditions from risk exposure to air contaminants, noise, or contaminated country foods would be managed, but reluctance to consume fish in waters understood to be hydrologically connected to the project may remain.

Changes to socio-economic condition

Added strain to social infrastructure

Aroland First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Nibinamik First Nation, Neskantaga First Nation, and Webequie First Nation raised concerns regarding the availability and quality of social infrastructure on reserves (e.g. health, education, and emergency response services), and the strain the project could place on the infrastructure as a result of non-Indigenous persons interacting with Indigenous community members while working on the project or accessing the land, which would have impacts on the mental and physical health, and overall wellbeing of Indigenous communities.

An influx of non-Indigenous persons, including workers, is anticipated during the construction and operation of the road. This would increase interactions between Indigenous and non-Indigenous persons, including through training and education programs off reserve and/or at the work sites as Indigenous persons take-up project related employment, as well as, through members of the public accessing the land once the project connects to the public highway network. Non-Indigenous workers often come from southern, urban centres with different values and western influences. This demographic shift within, or proximate to, an Indigenous community can create tensions and social conflict. Non-Indigenous workers may also introduce substances that are prohibited on many reserves in northern Ontario. For community members that may spend time away from the community for project-related work or training, that time away could also interfere with traditional practices and Indigenous language use by those members and possibly their families, which can negatively impact mental well-being. Together, these changes could lead to feeling disconnected and isolated and potentially increase instances of violence and substance use. In turn, it could lead to higher demand for health and social services on reserves (e.g. nursing stations, addiction and mental health services, child and family services, and emergency response services), adding to the existing strain. Additionally, the Municipality of Greenstone could experience added

pressures from Marten Falls First Nation community members heading south to access services that are offered to the Indigenous persons that live in the region.

To minimize workforce interactions with the social infrastructure of Marten Falls First Nation, the proponent proposed to install construction camps with all required ancillary facilities for the workers and locate temporary housing accommodations away from the community. These accommodations would also be for Indigenous community members who seek out employment opportunities from the project to further minimize housing and infrastructure pressures from project-related population influx of persons to Marten Falls First Nation.

The proponent also proposed to implement a gradual work force integration for Indigenous employees to ease them into construction roles and provide culturally relevant mechanisms to support their mental health through initiatives like zero-tolerance policy for Indigenous language discrimination, provide elders or cultural liaisons on site in collaboration with Marten Falls First Nation and Aroland First Nation, and provide a flexible work schedule during key hunting, trapping, and gathering seasons. These measures would help Indigenous workers and their families manage long periods away from home and minimize being away for culturally relevant activities meant to support their households. Other proposed mitigation measures include the following: provide cultural and environmental awareness training to employees; and establish procedures and plans regarding drug and alcohol use during project work.

The proponent also committed to establishing a working group with Marten Falls First Nation and Aroland First Nation to discuss community topics as they relate to infrastructure pressures, and how to offer mental health supports, counselling and addiction supports. This working group could help identify social well-being concerns and address them quickly before the problems magnify in Marten Falls First Nation and Aroland First Nation.

Additionally, as part of infrastructure improvements, the proponent identified that Marten Falls First Nation intends to build a community treatment centre within the community, once the road is operational, in anticipation of reduced cost for materials. The centre would be holistic and culturally appropriate, focusing on mental health and substance abuse. Once operational, the centre could alleviate pressure on health infrastructure for Marten Falls First Nation during the operation phase of the project where the community could come into contact with not just non-Indigenous workers, but also members of the public accessing the land.

IAAC is of the view that, with the implementation of these mitigation measures, there would be residual effects from increased pressures on social infrastructure, in part due to western influences from community members' interactions with non-Indigenous persons disrupting Indigenous Knowledge transfer and potentially fueling higher demand for services on reserve and the Municipality of Greenstone to address issues related to

substance use and violence. However, IAAC acknowledges that it is difficult to predict the project interactions with social infrastructure due to the limited information regarding existing availability and quality of infrastructure within Indigenous communities.

Added pressures on emergency response services

Indigenous communities could face added pressures on public safety services, including policing. Marten Falls Nation, Aroland First Nation and most other communities in the RSA have either Nishnawbe Aski Police Service or Anishinabek Police Service detachments on reserve that work in conjunction with the Ontario Provincial Police. These detachments are small and any change in community safety and crime, such as potential conflict that may arise between workers and community members or inflow of illegal or prohibited substances on reserve, would add pressure to these services. Furthermore, Women and Gender Equality Canada conducted a GBA Plus assessment to understand how diverse population groups may experience project effects differently when applied to the health, social, and economic conditions of the impact assessment and advised IAAC that an influx of workers may increase physical and sexual violence towards Indigenous women and girls, and raise the risk of human trafficking. Existing police services on reserve would have to manage the potential increase in gender-based violence in conjunction with the nearest Ontario Provincial Police detachment equipped to offer support.

To maintain road safety, policing services would be needed to monitor road usage and to ensure the provincial road safety standards are followed. IAAC understands that the Ontario Ministry of Transportation would implement road conditions patrols during the project's operation phase including in relation to maintenance activities. The proponent did not propose additional measures that would implement patrols of the road, so pressure could be placed on existing police services in Marten Falls First Nation and Aroland First Nation, the closest detachments to respond to incidents on the road.

In the event of an accident or natural disaster, there are no emergency medical or firefighting services available at Marten Falls First Nation, however, there is a volunteer firefighting service at Aroland First Nation and the nearest paramedic service would be Nakina located in the Municipality of Greenstone. Traffic accidents are expected to be limited by minimal vehicle interactions that could result in collisions and that natural disasters are expected to be infrequent.

To support public safety during the construction phase, the proponent intends to provide training programs for employees on the safety of Indigenous women and girls. Additionally, to monitor public safety during the operation phase, the proponent has committed to establishing a working group for Marten Falls First Nation and Aroland First Nation to discuss road safety and traffic challenges, as well as issues related to violence prevention and crisis support for victims. This working group could assist with bringing

forward identified issues and solutions to the proponent and community leadership as they arise locally.

IAAC is of the view that, with the implementation of the proposed training programs and the working group, increased pressures on emergency response services for traffic accidents or other incidents on the road would be infrequent while acknowledging it is difficult to predict human behaviour in relation to substance use, human trafficking and violence, which can influence the need for emergency intervention as well as impacts on the health and safety of Indigenous women and girls.

Decreased community well-being through pressures on traditional economy and practices

Animbiigoo Zaagi'igan Anishinaabek, Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Neskantaga First Nation, Nibinamik First Nation, and Weenusk First Nation expressed that being on the land has a positive influence on community well-being. IAAC understands that community well-being could be impacted by pressures on traditional practices and related economic activities, including knowledge sharing of these practices. The pressures may stem from the likely adverse effects on the current use of lands and resources (described in Section 4.3.2), as well as from avoiding or reducing land use to minimize health risk exposure related to the adverse effects on health condition (described above), and visual changes to the landscape due to project components and road use. If the barrier to practice cultural activities is magnified, issues related to mental and emotional health, food security, and behaviours like substance use that may exist within an Indigenous community could worsen.

The proponent identified two sources of traditional economy. These include commercial harvesting sites used for trapping and snaring, 13 of which have been identified, and a blueberry harvesting initiative operated by Aroland First Nation. Economic gain from commercial harvest sites used for trapping and snaring has diminished significantly over the years due to the low price for fur pelts versus the cost of accessing these sites. Of the traplines intersected by the project, it is unknown whether commercial trapping activity continues within the vicinity of the project. Recognizing the absence of trapper-specific information, the proponent stated the need for continued engagement with trapline holders and follow-up monitoring to understand long-term effects on commercial activities. Additionally, Aroland First Nation operates the Aroland Youth Blueberry Initiative, which provides an opportunity for the community to engage in cultural continuity with youth and provide economic opportunities through the sale of the wild blueberries harvested. Wild blueberries harvesting sites could be impacted from potential disturbances or overharvesting from non-community members.

Outside of the traditional economy, Indigenous communities in the Far North rely on traditional practices to support food security. ISC has advised that reserve populations in Ontario experience disproportionately higher rates of food insecurity than the rest of Ontarian households. The remoteness of communities means the cost of food is higher than southern Ontario, so hunting, trapping, fishing, and gathering are important aspects of accessing quality foods at a lower cost and also supports a traditional diet. These activities also support cultural continuity through the opportunity to pass on knowledge and language. Aroland First Nation, Ginoogaming First Nation, and Marten Falls First Nation expressed concern with food security based on increased pressures from outside anglers, hunters, and harvesters on areas where they conduct traditional practices. IAAC understands that outside pressures can come from non-Indigenous and Indigenous persons, who will have better access to the area.

Community well-being could also be impacted through changes in the visual landscape. The proponent indicated that the open-water views at the Ogoki River and Albany River crossings could cause visual effects to the enjoyment of land as it would be seen approximately 250 to 400 metres when approached on either side of the water. The Public Health Agency of Canada, shared with IAAC that this kind of change can lead to feelings of ecological grief, negatively impacting mental well-being.

IAAC is of the view that, with the implementation of mitigation measures identified in Section 4.2.2, and given that the project could ease access by Indigenous community members, potentially increasing opportunities to interact with the land, community well-being through traditional practices on the land would be minimally altered. However, IAAC acknowledges it is difficult to predict the interest from members of the public and new Indigenous community members to access the land once the road is constructed.

4.3.3.2 Residual effects

Based on the above assessment, IAAC is of the view that the project would likely result in residual effects that include changes to health conditions that are not significant, as well as effects on infrastructure and cultural continuity stemming from an influx of workers, an increase in ease to access the land, and disruptions to the ability to pass on Indigenous Knowledge that are likely to be significant.

The residual effects, taking into account the mitigation measures described above, would be up to moderate in magnitude and geographic extent, specifically for social effects, as the project would strain the existing infrastructure of Indigenous communities (e.g., policing, substance use and victims' services) and cultural continuity, through exposure to new stressors and pressures. Timing, frequency, duration and reversibility would be high as the need for and access to quality and culturally relevant social services by Indigenous persons could occur at any time, be continuous and the strain on services would persist for an undetermined period and collectively have longer term ramifications on community

well-being due to influx of western influences. Marten Falls First Nation has demonstrated resilience and willingness to withstand those stressors in order to benefit from the positive effects of the project, however, due to the connection of the road to the existing highway network, additional Indigenous communities could face strains on the infrastructure and services they use, whether those infrastructure and services are located on reserve or in the Municipality of Greenstone. Additionally, there is a high level of uncertainty regarding the effectiveness of the socio-economic mitigation measures, given it is difficult to predict human behaviour and needs.

IAAC concludes that the residual adverse effect of the project on the health, social and economic conditions of Indigenous Peoples is likely to be significant to a moderate extent, specifically due to the likely social effects.

4.3.3.3 Cumulative effects

The residual effects of the project on the health, social, and economic conditions of Indigenous Peoples, in combination with other proposed road projects and mining activity in the Ring of Fire area – namely the proposed Webequie Supply Road Project, the proposed Northern Road Link Project, the proposed Anaconda and Painter Lake Roads Upgrade Project, the Rapid Lynx Broadband Project, and mineral exploration followed by mining at the proposed Eagle's Nest site – are likely to have cumulative effects. If these other road projects and mining activity become operational, their cumulative effects on health, social, and economic conditions of Indigenous Peoples would be amplified beyond the LSA of the project and impact Indigenous communities within the LSA and RSA.

Combined, these proposed projects would increase road traffic, raising safety risks for Indigenous community members. An influx of non-Indigenous workers would also strain social infrastructure (e.g. policing, substance use treatment, victim services), introduce western influences and greater access to alcohol and drugs that may conflict with Indigenous ways of life, and may also pose additional safety risks to Indigenous women and girls. In addition, noise and other sensory changes from construction and operation of the proposed projects would affect traditional land-based practices and cultural continuity.

IAAC notes that the proponent has proposed measures to limit interactions between non-Indigenous workers and nearby Indigenous communities' social infrastructure, as well as measures to support positive social interactions. IAAC does not recommend further mitigation measures or follow-up programs related to cumulative effects.

Taking into consideration the recommended mitigation measures in Section 4.3.3.4 below, the likely cumulative effects on Indigenous Peoples' health, social and economic conditions would be moderate in magnitude, since already strained social infrastructure would be further strained by the project in combination with other foreseeable projects.

Geographic extent, timing, frequency, duration and reversibility would be high as the need for and access to quality and culturally relevant services by Indigenous Peoples is continuous, and the strain on services would persist for an undetermined period, as well as extend into the RSA (i.e. Municipality of Greenstone) and be irreversible. IAAC understands that anticipated changes brought on by the project in combination with future projects would cause considerable interactions with the social infrastructure of Indigenous communities. Uncertainty is high due to incomplete information about Indigenous communities' health, social and economic conditions.

IAAC notes that the long-term adverse effects could be managed from a regional context through leveraging government programs in collaboration with affected Indigenous communities and the Government of Ontario. IAAC also notes there is variability, as well as uncertainty, about the resiliency and willingness of Indigenous communities across the Far North of Ontario to absorb the additional stressors to their communities, as well as benefit from any socio-economic opportunities, from the project in the context of the other foreseeable projects. The project would contribute to these cumulative social effects by facilitating or amplifying effects from other foreseeable projects.

IAAC concludes that cumulative effects to the health, social and economic conditions of Indigenous Peoples is likely to be significant up to a moderate extent primarily through strain on social infrastructure as the project, in combination with other foreseeable projects, would facilitate access and means of influence to remote Indigenous communities adding up to uncertain, but likely fundamental social changes for Indigenous Peoples in the region.

4.3.3.4 IAAC's recommended mitigation measures for implementation by the proponent pertaining to effects on the health, social and economic conditions of Indigenous Peoples

Recommended mitigation measures that would be potentially included as conditions in the impact assessment decision statement include:
Implement the following mitigation measures to promote safe, respectful and inclusive conduct in the workplace and community, as appropriate, within four months of commencing construction: • implement a workplace anti-harassment, anti-bullying, anti-discrimination and anti-violence policy that incorporates gender-appropriate, gender-specific, and culturally appropriate policies and processes, including sexual harassment and assault counselling as well as confidential and culturally sensitive care; • implement a workplace policy on the use and possession of drugs and alcohol, which prohibits the use of, or being under the influence of, prohibited drugs or alcohol during work hours; and

• establish a worker code of conduct that outlines expectations and requirements in relation to the measures developed to promote safe, respectful and inclusive conduct in the workplace and the community while incorporating above policies.
Recommended mitigation measures that would be potentially ensured by the Government of Ontario include:
Implement, at a minimum, the following mitigation measures to control fugitive dust emissions from the project, as appropriate, to mitigate adverse effects on the health of Indigenous Peoples: • use water or an environmentally acceptable alternative to stabilize the surface of Project roads and areas that may generate dust; and • cover or enclose material that may become a source of fugitive dust in stockpiles, moved on conveyors or transported within and outside the project CDA.
Establish speed limits on project roads.
Implement, the following mitigation measures to control fugitive particulate emissions from mobile equipment and vehicles operating in the CDA, as appropriate, to mitigate adverse effects on the health of Indigenous Peoples: • Establish and enforce a policy to prohibit unnecessary idling, except when required for health, safety, or operational reasons; and • Ensure regular inspection, servicing, and maintenance of engines and exhaust systems on all mobile equipment and vehicles.
Develop mandatory cross-cultural awareness training deliver it to all employees and contractors involved in the project.
Refer to measures in Section 4.3.1 related to sensory disturbance (air quality and noise); and Section 2.1, for water quality monitoring.

4.3.4 Positive effects on Indigenous Peoples

The project would have positive effects on Indigenous Peoples through increase in employment, training, business opportunities, and on-reserve population levels, at least for the community of Marten Falls First Nation.

The proponent intends to hire, where possible, Indigenous persons for the construction and operation phases of the project. The hires would most likely reside in Marten Falls First Nation and possibly other Indigenous communities near the project, such as Aroland First Nation.

The proponent is aware that the skill levels of Indigenous community members may not align with the types of jobs that would be available during construction and operation. In order to better utilize the local Indigenous workforce, the proponent would create a local

training plan to complete a skills assessment. Additionally, the proponent would provide information on the types of jobs required during the construction and operation phases so Indigenous community members are aware of the skills required. These two initiatives would help to understand the labour available locally and assist those who desire employment from the project identify the skills training they would need to access those jobs. Lastly, the proponent is proposing to collaborate with organizations to provide training that would align with the gaps identified through the local training plan and the jobs available from the project. This would assist with job readiness of Indigenous community members.

The proponent also indicated that an increase in employment and economic activity, as well as all-season access to the public highway network could have a positive impact on local incomes, stimulate local Indigenous economies, increase access to health care and educational services, and reduce the cost of goods and services on reserve, which could mean better prices for necessities and improved infrastructure. All of which would create a better environment for community members to return to on-reserve living and reduce the number of community members wanting to leave reserves to pursue education and economic opportunities elsewhere. Returning family members could help strengthen community ties within Marten Falls First Nation.

IAAC is of the view that the project would likely have positive effects on Indigenous Peoples' employment and economic opportunities, provided the proponent ensures that the above enhancement measures would be implemented effectively and community members are receptive and successful in exploiting the measures. The project may also improve the infrastructure of Marten Falls First Nation due to connection to the all-season highway network, which may make it easier to access cheaper goods and services. Lastly, the project could strengthen community cohesion through a positive effect on the population level of Marten Falls First Nation reserve and, to a lesser extent, nearby Indigenous communities. IAAC notes that these positive effects are uncertain, as the likelihood for the employment and economic opportunities, and subsequent socio-economic benefits for the communities, would be dependent on external, market influences.

4.4 Impacts on Indigenous rights

The IAA requires that potential impacts on the exercise of section 35 rights of Indigenous Peoples be considered as part of a federal impact assessment of a designated project. The adverse federal effects to Indigenous Peoples described in Section 4.3 of this report inform the assessment of impacts on the exercise of section 35 rights.

This section summarizes how the project may potentially impact the exercise of section 35 rights. The final IA report will contain an appendix with a summary of the issues of concern shared by Indigenous communities with IAAC throughout the Impact Assessment.

4.4.1 Methodology

The federal government has a legal duty to consult and, where appropriate, accommodate Indigenous communities, when the Crown contemplates conduct that may adversely affect the exercise of Aboriginal and/or treaty rights that are recognized and affirmed in section 35 of the *Constitution Act, 1982*. In conducting the assessment of impacts on the exercise of rights, IAAC considered how non-negligible adverse changes to the environment on Indigenous Peoples' current use of lands and resources for traditional purposes (Section 4.3.1), sites of importance and physical and cultural heritage (Section 4.3.2), and non-negligible adverse changes to Indigenous Peoples' health, social and economic conditions (Section 4.3.3) would impact the exercise of each community's section 35 rights. IAAC's methodology for assessing impacts on the exercise of section 35 rights involved identifying existing rights and identifying key values that support the exercise of rights and understanding the pathways from project-related activities to changes to the environment that may result in changes to the exercise of rights ('impact pathways'). In its assessment, IAAC considered the potential for reasonably foreseeable activities to cumulatively affect the conditions that could limit the meaningful exercise of Indigenous communities' section 35 rights. IAAC used the proponent's caribou RSA (see Figure 7) as the spatial boundary for impacts to the right to hunt and trap, and to the right to a continued way of life, and used the fish and fish habitat RSA (see Figure 2 [Section 2.1]) as the spatial boundary for impacts to the right to fish and water, which capture the outermost boundary where the likely residual effects of the project would interact with the likely effects of reasonably foreseeable activities (the proposed Webequie Supply Road Project, the proposed Northern Road Link Project, the Anaconda and Painter Lake Roads Upgrade project, the Rapid Lynx Broadband project and mineral exploration followed by mining at the proposed Eagle's Nest site).

IAAC sought information as well as Indigenous Knowledge from all potentially impacted Indigenous communities about the nature and extent of their section 35 rights and how the project may affect the exercise of their rights. For the purposes of the assessment of impacts on the exercise of section 35 rights, IAAC considered the potential impacts of the project on section 35 rights as articulated by Indigenous communities directly, as well as other information available to IAAC, including from the proponent's Impact Statement. IAAC considered the likelihood of impacts, geographic extent, frequency, duration, and reversibility, whether and how impacts on rights could be informed by additional factors, such as community health and well-being, and the proposed mitigation measures designed to minimize or avoid impacts. IAAC also considered how historic and current activities have affected the conditions that support the meaningful exercise of rights, as well as the cumulative impacts from reasonably foreseeable development.

Impact pathways are organized into three categories: effects to resources, access, and experience. Effects to resources considered Indigenous communities' right to sufficient quantity and quality resources in culturally important areas, as well as their right to connect to resources in a way that supports cultural continuity and intergenerational transfer of cultural practices and knowledge. Effects to access considered Indigenous communities' right to access important areas throughout their traditional territory without difficulty or health and safety risks, and to use preferred modes of travel and visit areas at preferred times. Effects to experience considered Indigenous communities' right to spend time on the land in peace and quiet, in physical and mental safety, and free from sensory disturbance.

Table 4 provides the definition of each assessment criterion to assign the severity of impact on section 35 rights.

4.4.2 Existing section 35 rights

The project is located in northern Ontario, within the area of Treaty 9 (1905-1906) (also known as the James Bay Treaty). Together with the area acquired by adhesions in 1929-1930, Treaty 9 spans almost two-thirds of what is currently the province of Ontario and defines the right to hunt, fish, and trap throughout the treaty territory. Aboriginal rights asserted by the potentially impacted Indigenous communities include the right to continued way of life, which involves the ability to practice their culture and share it with future generations. IAAC assessed potential impacts of the project on harvesting rights, which include the treaty rights to hunt, fish, and trap, and potential impacts on the Aboriginal right to a continued way of life. In this section, they were grouped and assessed as follows: hunting and trapping rights, rights to fishing and water, and right to a continued way of life. In this section, they were grouped and assessed as follows: hunting and trapping rights, rights to fishing and water, and right to a continued way of life.

The project is also located entirely within the Matawa traditional territory which is shared by nine Indigenous communities: Aroland First Nation, Constance Lake First Nation, Eabametoong First Nation, Ginoogaming First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Neskantaga First Nation, Nibinamik First Nation, and Webequie First Nation.

The project is located within the traditional lands of Marten Falls First Nation. The CDA overlaps with the traditional lands of Aroland First Nation, Eabametoong First Nation, and Ginoogaming First Nation overlap.

The Métis Nation of Ontario holds section 35 rights, including the right to hunt, trap, fish, and gather material that are important to Métis culture. This includes being able to practice its culture and share it with future generations. The project is located outside Métis Nation of Ontario's Nipigon and James Bay harvesting areas. IAAC understands that Métis

Nation of Ontario does not assert section 35 rights in the area where project effects are anticipated, and that Métis Nation of Ontario's interests in the project relate to archaeology, Métis history, and culture.

4.4.3 Harvesting Rights

The assessment of impacts on harvesting rights considered the project's residual adverse effects to the availability, quality, and ability to access resources. The assessment also considered contextual factors including pre-existing impacts and current socio-economic conditions that inform the exercise of each right. Table 4 provides the definition of each assessment criterion used to assign the severity of impact.

Hunting and Trapping Rights

A brief summary of the potential interactions and impact pathways on hunting and trapping rights are outlined below. For a more comprehensive overview of the predicted effects of the project on migratory birds, the current use of lands and resources by Indigenous Peoples for traditional purposes, physical and cultural heritage, and health, social, and economic conditions see Sections 2.2, 4.3.1, 4.3.2, and 4.3.3, respectively.

Context in which impacts on hunting and trapping rights would occur

All potentially impacted Indigenous communities described the importance of the exercise of hunting and trapping rights for sustenance and food security, and as a cornerstone of their culture and identity. Aroland First Nation described how harvesting and consuming country foods, moose in particular, strongly supports community members' wellbeing.

Fort Albany First Nation noted the importance of rivers, which are of key importance for accessing harvesting and cultural areas and travelling to other communities (including Marten Falls First Nation).

All Indigenous communities described caribou as a species of great cultural importance, and noted the continued importance of other wildlife, including moose and waterfowl.

Most Indigenous communities indicated that they rely on moose as a key component of a traditional diet with caribou hunted less frequently, although Kitchenuhmaykoosib Inninuwug First Nation and Weenusk First Nation shared that they continue to rely on caribou for sustenance. Both Long Lake #58 First Nation and Marten Falls First Nation noted that reliance on moose is due to the reduced availability of caribou, and that caribou remain culturally important.

All potentially impacted Indigenous communities noted they hunt migratory birds, including geese, grouse, and ducks. Attawapiskat First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Marten Falls First Nation, and

Weenusk First Nation described the importance of the seasonal goose hunt as an expression of the communities' hunting rights and an opportunity for families to gather.

Marten Falls First Nation noted that trapping has been historically central to community members' livelihoods. However, for many potentially impacted Indigenous communities, reliance on hunting and trapping has decreased compared to previous generations. Participation in trapping has declined due to low fur prices, high costs (e.g., for equipment, fuel, and maintenance), and reduced abundance of furbearers. Nevertheless, Webequie First Nation has noted that reliance on country foods is increasing within the community, due to the high price of fresh fruits and vegetables.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Attawapiskat First Nation, Fort Albany First Nation, Ginoogaming First Nation, Long Lake #58 First Nation, Marten Falls First Nation, and Weenusk First Nations shared that the ability to exercise hunting rights has already been impacted by existing development, including forestry and river diversions, and other changes in the region that have reduced wildlife availability and quality. Nibinamik First Nation noted that helicopter activity associated with mineral exploration has resulted in a decreased availability of caribou and moose in preferred hunting locations, while Eabametoong First Nation described that community members now avoid certain hunting lodges due to nearby helicopter activity that disturbs the peace and quiet of the area.

Fort Albany First Nation noted that goose migration has been affected by the installation of a nearby transmission line, which has negatively affected the seasonal goose hunt.

One Indigenous community shared, confidentially, that the ability to harvest caribou has decreased recently, because accessing harvesting sites has become more challenging due to climate change: changes in ice formation and breakup patterns has increased the time, safety risks, and costs required for a successful hunt.

Pathways of impact from the project on hunting and trapping rights informed by consultations with Indigenous communities

Changes to wildlife availability and wildlife habitat

Based on IAAC's assessment of effects (Sections 2.2, 4.3.1 and 4.3.3), IAAC anticipates that the project would result in changes to the availability of wildlife, and changes to Indigenous communities' ability to successfully hunt and trap, due to wildlife displacement from sensory disturbance, degradation and loss of habitat, wildlife mortality from increased predation and increased hunting by non-Indigenous persons, and changes to access to hunting and trapping sites. IAAC does not anticipate residual adverse effects on the quality of wildlife.

Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Long Lake #58 First Nation, Nibinamik First Nation, Webequie First Nation, and Marten Falls First Nation and Weenusk First Nation raised concerns that project-related sensory disturbances (e.g., noise, lights, odours, and human activity) during the construction and operation phases of the project, would result in alteration of movement patterns and avoidance of the project area, displacing wildlife from preferred habitats and disconnecting those habitats. Attawapiskat First Nation, Ginoogaming First Nation, Kitchenuhmaykoosib Inninuwug First Nation, and Weenusk First Nation stressed that avoidance of the road could disrupt caribou migration patterns.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Ginoogaming First Nation, and Marten Falls First Nation expressed concern that traffic on the road would increase the risk of wildlife-vehicle collisions, causing to death and injury, particularly in ungulates.

Constance Lake First Nation, Fort Albany First Nation, Long Lake # 58 First Nation, Marten Falls First Nation, and Nibinamik First Nation noted that project impacts could cause ecological imbalances that would affect predator-prey relationships, reducing the availability of preferred wildlife species.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Attawapiskat First Nation, Constance Lake First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Marten Falls First Nation, Neskantaga First Nation, and Weenusk First Nation also raised concerns that the project would increase hunting pressure on wildlife during the construction and operation phases, reducing wildlife availability for Indigenous land-users. Marten Falls First Nation were particularly concerned about hunting pressure in the area where the Wabassi River would be intersected by the road, an area used by community members for hunting.

Attawapiskat First Nation and Neskantaga First Nation worried that project construction could damage eskers, which provide important wildlife habitat and function as movement corridors for caribou and other species.

Marten Falls First Nation also noted that vegetation removal, soil disturbance, and ongoing use of the road could result in the death of birds, and the destruction of their nests and eggs.

Eabametoong First Nation, Ginoogaming First Nation, Kashechewan First Nation, Marten Falls First Nation, and Nibinamik First Nation shared that any reduction in the ability to harvest country foods due to the project, whether because of reduced wildlife availability, or due to concerns about adverse effects to the quality of animals (e.g., from spills, waste, or the release of methylmercury), would threaten food security, and negatively impact community members' health. Animbiigoo Zaagi'igan Anishinaabek First Nation and Attawapiskat First Nation explained that the exercise of harvesting rights is contingent on

a sufficiency of healthy animals, and that concerns about the quality of wildlife could result in harvesters losing trust in, and not harvesting within areas understood to be contaminated.

Indigenous communities expressed concerns that the cumulative effects of reasonably foreseeable development, and future induced development could reduce the availability of key wildlife, affecting the ability to exercise the right to hunt. Animbiigoo Zaagi'igan Anishinaabek First Nation, Attawapiskat First Nation, and Kitchenuhmaykoosib Inninuwug First Nation noted that the three proposed road projects and other induced development could result in adverse impacts to the seasonal ranges, habitat, and calving areas of caribou and other species. Animbiigoo Zaagi'igan Anishinaabek First Nation, Eabametoong First Nation, Ginoogaming First Nation, and Nibinamik First Nation also shared a more general concern that wildlife availability would decrease due vehicle collisions, and increased habitat fragmentation and degradation caused by these projects.

Fort Albany First Nation expressed particular concern about the cumulative impacts, particularly from climate change to the Albany river system, the health of which is key to Fort Albany First Nation’s expression of rights.

Loss of preferred hunting and trapping sites and change in access

Based on IAAC’s assessment of effects (Sections 2.2, and 4.3.1), IAAC anticipates that the project would result in the irreversible loss of preferred hunting and trapping areas within the CDA and changes to safe access to harvesting sites that are within the CDA, or that require passage through the CDA to access.

Indigenous communities’ use within and adjacent to the CDA is concentrated along the Albany and Ogoki Rivers, and their tributaries, which have been identified as key waterbodies by many potentially affected Indigenous communities.

Marten Falls First Nation hunt moose and caribou at sites within the CDA on the Albany River and on Gourlie Creek, and within the LSA on the same watercourses, as well as at Teabeau Lake and along the Wabassi River. Marten Falls First Nation also indicated that there are hunting and trapping sites, and key moose habitat along the Dusey River, which crosses the CDA. However, IAAC is not aware of the location of these sites on the Dusey River relative to the CDA.

Marten Falls First Nation shared concern about impacts to the Ogoki Forest, a portion of which will be overprinted by the southern portion of the CDA. The Ogoki Forest was described as a vital source of life, providing employment, food, water, medicine, and the physical and spiritual foundation of traditional culture.

Aroland First Nation noted that access to preferred areas used for hunting and trapping along the Ogoki and Albany rivers, and along the road corridor could be lost, permanently

or temporarily, due to construction activities, potentially during important seasons for harvesting. Aroland First Nation also noted that exposure to dust would impact harvesters' willingness to use the road.

Eabametoong First Nation noted that members have intensively used the Wabassi River area for harvesting and travel and are concerned that the project may restrict access to the area.

Fort Albany First Nation and Kashechewan First Nation characterized the Albany River as a lifeline, highlighting its importance for harvesting in this area. Fort Albany First Nation noted navigation restrictions could limit the use of the Ogoki and Albany Rivers for harvesting. They indicated that community members hunt moose along the Ogoki and Upper Albany Rivers, but IAAC is not aware of the specific locations. Animbiigoo Zaagi'igan Anishinaabek First Nation shared that they have a long history of harvesting along the Albany and Ogoki Rivers and worry that increased public access would affect the ability to hunt and trap.

Kashechewan First Nation indicated that community members would likely avoid harvesting in areas in proximity to access controls, or where pesticides, herbicides, or dust suppressants are applied, and that members prefer to harvest in undisturbed areas. The proponent notes that herbicides and pesticides will not be used for vegetation maintenance, and that non-chloride compounds will be used for dust suppression.

As documented in Section 4.3.1, the project would overprint and impede access to multiple community held traplines. Aroland First Nation, Marten Falls First Nation, and Ginoogaming First Nation noted that they hold traplines that would be overprinted by the CDA. Although the proportion of traplines that are overprinted by the road is small, Aroland First Nation shared that trappers' ability to trap successfully is tied to their deep knowledge of the land, including effective access routes. Consequently, shifting trapping activity elsewhere within a trapline, due to land clearing or construction activities, may affect trapping success.

IAAC's Assessment of Impact to Hunting and Trapping Rights

IAAC is of the view that, after taking into account the implementation of mitigation measures, the project would result in residual effects to current use of lands and resources for traditional purposes by Indigenous Peoples that are likely to be significant to a low extent as described in Section 4.3.1, due to decreased resource availability or concerns thereof, safe access and quality of experience. IAAC finds that cumulative effects to the current use of lands and resources for traditional purposes by Indigenous Peoples are likely to be significant to a low extent for traditional harvesting activities, except for hunting of ungulates (particularly caribou), which is likely to be significant to a moderate extent due to changes in resource availability that would result from the project and other reasonably foreseeable projects, that, together would alter movement patterns

and range areas. The changes to distribution and movement of caribou could affect availability at known or preferred reliable harvesting areas. These effects to current use directly impact Indigenous communities' hunting and trapping rights.

IAAC acknowledges the importance of the Albany and Ogoki River systems to Indigenous communities and their concerns regarding cumulative effects impacting the river system. IAAC is of the view that cumulative effects from reasonably foreseeable projects within the two river systems would be additive with the residual effects from the proposed project, having the potential to affect wildlife availability (in particular, caribou) as well as safe access to harvesting sites, and the quality of experience while harvesting. However, IAAC is of the view that the ability to hunt will be maintained within respective project RSAs.

IAAC understands that the project may result in impacts on Indigenous communities' ability to practice hunting and trapping rights in their preferred manner by reducing safe access to hunting and trapping areas within the CDA, reducing the availability of wildlife, contributing to concerns about the quality of wildlife, and changing the experience of hunting and trapping practices. Changes to Indigenous Peoples' experience of the land are discussed in greater detail in Section 4.4.4 (see subsection titled Changes to Tangible and Intangible Cultural Heritage).

IAAC understands that for Aroland First Nation, Ginoogaming First Nation and Marten Falls First Nation the project would result in the irreversible loss of portions of preferred hunting and trapping areas that are overprinted by the project. For Indigenous communities including Animbiigoo Zaagi'igan Anishinaabek First Nation, Eabametoong First Nation, Fort Albany First Nation and Kashechewan First Nation the project may result in the loss of hunting areas that would be overprinted by the project. However, IAAC does not know the specific locations of the preferred harvesting areas in relation to the CDA.

Changes to the ability to safely access preferred hunting or trapping areas would be temporary (i.e., during the construction phase), intermittent and reversible. However, changes to the ability to safely traverse traplines bisected by the road would persist through the operation phase. The proponent committed to mitigate impacts on safe access by creating temporary access roads or detours during the construction phase, scheduling construction activities outside of peak harvesting periods, and to ensure that sight distance on the road is sufficient to ensure drivers have time to identify and react to all elements of the road environment. In addition, the proponent anticipates that the traffic volume on the road will be low (on average, 700 vehicles per day on the north-south portion, and 100 vehicles per day on the east-west portion), with a mix of personal and commercial vehicles.

IAAC acknowledges that uncertainty about potential contamination of country foods, due to spills and leaks, and/or changes in hydrological conditions may result in avoidance of hunting and consumption of wildlife from areas understood to be impacted. IAAC notes that the involvement of Indigenous communities in a follow-up program to monitor effects

to wildlife species of importance described in Section 4.3.1.4 is critical to enable the continued exercise of hunting and trapping rights.

Changes to caribou availability from residual project effects during construction and operation, including the loss and degradation of caribou habitat, avoidance of the caribou LSA due to sensory disturbance, and increased predation are expected to displace caribou away from the caribou LSA and further into the caribou RSA (defined as the Missisa, Nipigon, and Ozhiski, and Pagwachuan caribou ranges), reducing habitat connectivity and altering movement and migration patterns.

IAAC is of the view that a project-related reduction in the availability of caribou within the LSA, and changes to movement and migratory patterns throughout the RSA, may reduce harvesting success. IAAC recognizes that, given the high cost of fuel in remote communities, harvesting success is an important factor that influences the likelihood of land-users engaging in land-based activities. Together, these impacts may result in adverse impacts on the exercise of hunting rights. IAAC recognizes the importance of involving Indigenous Peoples in wildlife monitoring programs and the timely sharing of monitoring results.

Changes to the availability of moose, furbearers, and game birds due to habitat loss, alteration of movement patterns and increased wildlife mortality would be limited to the areas adjacent to the CDA. The proponent proposed multiple mitigation measures to address effects on the availability of wildlife due to increased hunting pressure and increased predation, including prohibiting hunting and harvesting by construction and maintenance workers and on-site visitors (see additional details in Section 4.3.1).

IAAC is of the view that the project would result in localized reductions in the abundance of other wildlife, including moose, waterfowl, and furbearers, and changes to the experience of hunting and trapping activities that could result in the displacement of harvesting activities by Indigenous Peoples away from the CDA and into respective LSAs or RSAs (described in Section 4.3.1).

As described in Section 4.3.1, IAAC is of the view that for all wildlife populations, habitat will remain regionally available and populations will remain sustainable within the caribou and other wildlife RSAs.

IAAC is of the view that the project, in combination with reasonably foreseeable physical activities is likely to reduce the availability of caribou within the respective project LSAs and alter movement patterns and range areas within the project RSA. These changes, in addition to the project-related changes discussed above, may further reduce harvesting success throughout the RSA, diminishing the ability to exercise hunting rights. For Indigenous communities that have decreased their caribou harvest, or no longer harvest caribou due to reduced availability, the cumulative effects to caribou may further challenge attempts to ensure caribou remain available for future generations.

IAAC recognizes that the severity of project-related impacts on hunting and trapping rights would vary by Indigenous community. Table 4 provides the definition of the assessment criteria used to assign the level of impact for each rating criterion, and Tables 5 and 6 provide IAAC's preliminary conclusions on the severity of impact for each criterion. IAAC is of the view that the mitigation and monitoring measures identified in Sections 2.2.4 and 4.3.1.4 may support Indigenous communities' continued ability to exercise hunting and trapping rights, through inviting Indigenous community members to participate in project-related environmental monitoring activities and promptly sharing monitoring results, minimizing sensory disturbance, and limiting the loss of sensitive habitats.

Rights to Fishing and Water

A brief summary of the potential pathways of project's effects on the physical and biological conditions that support the right to harvest fish and use water resources is outlined below. Additional information about the predicted effects of the project on fish and water may be found in the fish and fish habitat, current use of lands and resources by Indigenous Peoples for traditional uses, and health, social, and economic sections (Sections 2.1, 4.3.1, and 4.3.3 respectively).

Context in which impacts on fishing rights would occur

All potentially impacted Indigenous communities described the importance of fishing, noting that it is a key component of a country food diet that supports health and wellbeing. Aroland First Nation, Neskantaga First Nation, Constance Lake First Nation, Eabametoong First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Ginoogaming First Nation, and Nibinamik First Nation shared how fishing was integral to cultural practices and the communities' way of life, noting that the act of sharing country foods strengthens community bonds.

Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Fort Albany First Nation, Ginoogaming First Nation, Marten Falls First Nation, Kashechewan First Nation, Kitchenuhmaykoosib Inninuwug First Nation, and Weenusk First Nation noted that access to clean water is essential when engaging in harvesting, and spiritual and ceremonial activities, and that it supports community members' wellbeing. A Ginoogaming First Nation elder described water as the "giver of life" on which all other resources depend. Both Long Lake #58 First Nation and Kashechewan First Nation noted that community members rely on drinking water sourced from rivers when out on the land.

Multiple Indigenous communities described how changes over the past few decades have impacted their ability to practice fishing rights within their territories.

Aroland First Nation, Constance Lake First Nation, and Kashechewan First Nation described how industrial development (including forestry and mining) in their territories has altered fish habitat, impaired water quality and fish health, and led to declines in fish

populations. Ginoogaming First Nation, Long Lake #58 First Nation, Kitchenuhmaykoosib Inninuwug First Nation, and Webequie First Nation noted that certain fish species within their territory exceed consumption guidelines for contaminants, while Weenusk First Nation expressed concern that mercury levels in walleye and pike are rising, which may impact community members' health.

Eabametoong First Nation has noted that water diversions on the Albany and Ogoki rivers have hindered community members' ability to navigate and harvest on these rivers. Long Lake #58 First Nation, Fort Albany First Nation, and Kashechewan First Nation also noted that dams have adversely affected both aquatic ecology and river navigation in their territory. Despite these changes, Neskantaga First Nation commented that the road is located in relatively intact watersheds that contain relatively unperturbed fish populations, which are important cultural and economic resources.

Pathways of impact from the project on fishing and water rights informed by consultations with Indigenous communities

Changes to the availability and quality of fish, fish habitat, and water

Based on IAAC's assessment of effects (Sections 2.1, 4.3.1 and 4.3.3), and considering the implementation of mitigation measures, IAAC anticipates that the project would result in localized death and harm to fish due to in-water work and increased recreational fishing, and loss and degradation of fish habitat, which would affect fish availability for harvesters within the CDA, making the practice of fishing rights more difficult in locations within and near the CDA. IAAC does not anticipate residual adverse effects on the quality of fish.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Attawapiskat First Nation, Aroland First Nation, Constance Lake First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation raised concerns about contamination risks associated with construction and operation of the project, including spills and leaks, runoff, and the release of methylmercury. They noted that these could degrade water quality and contaminate waterbodies used for fishing, drinking, and cultural practices.

Aroland First Nation and Eabametoong First Nation emphasized that spills cause by accidents or malfunctions could result not only in major contamination, but also in a fear of contamination, leading to avoidance of fishing, hunting, and cultural activities over large downstream areas, even where contamination may not be confirmed. Animbiigoo Zaagi'igan Anishinaabek First Nation noted that the remoteness of the area, fast-moving currents, and limited shoreline access could make spills difficult to contain and clean up, increasing the risk of exposure. Marten Falls First Nation and Kashechewan First Nation highlighted risks of contamination entering peatlands, where interconnected hydrology

may allow pollutants to spread unpredictably, stressing the need to closely monitor the movement of water.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Constance Lake First Nation, Ginoogaming First Nation, Marten Falls First Nation, and Nibinamik First Nation raised concerns that blasting could harm or kill fish, while sedimentation due to in-water works could disrupt spawning, and damage eggs and juvenile fish.

Marten Falls First Nation noted that several rivers crossed by the project are important spawning areas, including for brook trout on the Dusey River and lake sturgeon in the Ogoki River and at Kagiami Falls on the Albany River.

Aroland First Nation, Ginoogaming First Nation, Marten Falls First Nation, Nibinamik First Nation, and Neskantaga First Nation raised concerns that increased fishing by non-Treaty 9 rights-holders, including project workers, could increase pressure on preferred fish species and reduce their availability for Indigenous harvesters.

Attawapiskat First Nation, Constance Lake First Nation, Fort Albany First Nation, Ginoogaming First Nation, and Marten Falls First Nation raised concerns that consuming contaminated fish or water could negatively affect community members' health. Attawapiskat First Nation, Fort Albany First Nation, and Marten Falls First Nation further noted that fear of contamination and resulting avoidance of fish could undermine health and food security, as country foods are viewed as healthier than store-bought alternatives.

Attawapiskat First Nation, Ginoogaming First Nation, and Nibinamik First Nation raised concerns that the project, in combination with reasonably foreseeable developments and future induced development, could increase pressure on fish populations, degrade fish habitat and water quality, alter water levels, and irreversibly affect peatlands and the ecosystems they support, thereby adversely affecting the ability to exercise the right to fish.

Loss of and change in access to preferred fishing sites and change in fishing experience

IAAC understands that the project would involve the construction or installation of 47 bridges and 21 culverts, and that in-water work to construct and maintain water crossings would temporarily limit but not prevent navigation at locations of in-water works during construction and maintenance activities.

Marten Falls First Nation indicated that multiple fish harvesting sites on the Albany, Ogoki, and Duesy Rivers, as well as on Gourley Creek would be overprinted by the CDA, while Kashechewan First Nation noted that two fish harvesting sites would be overprinted by the CDA. Aroland First Nation emphasized the importance of the Dusey and Ogoki rivers for fishing and noted that the CDA would overprint a fishing site. Animbiigoo Zaagi'igan Anishinaabek First Nation also reported fishing within the CDA.

Fort Albany First Nation and Keshechewan First Nation reported fishing in rivers that would be crossed by the project but did not share site-specific fishing locations. Fort Albany First Nation and Kashechewan First Nation characterized the Albany River as a lifeline, highlighting its importance for harvesting. Both Animbiigoo Zaagi'igan Anishinaabek First Nation and Fort Albany First Nation described the Ogoki and Albany Rivers as important for fishing, for species including sturgeon, northern pike, pickerel. Eabametoong First Nation also noted that community members fish on the Albany River for sturgeon, and the Wabassi River for trout.

Eabametoong First Nation, Fort Albany First Nation, and Marten Falls First Nation indicated that construction activities would restrict access to preferred fishing sites along or near the project. Kashechewan First Nation indicated that community members would avoid areas with signs of construction (e.g., blasting, presence of industrial workers, murky waters, development odours, or industrial workers), and that they would prefer to harvest in quiet and clean areas with intact ecosystems.

IAAC's Assessment of Impact on Rights to Fishing and Water

IAAC is of the view that, after taking into account the implementation of mitigation measures, the project would result in residual and cumulative adverse effects on fish and fish habitat likely to be significant to a low extent (see Section 2.1 for additional details). The residual and cumulative adverse effects to current use of lands and resources for traditional purposes by Indigenous Peoples, as it relates to fishing, is likely to be significant to a low extent (see Section 4.3.1 for additional details). Effects to current use directly impact Indigenous communities' fishing rights.

IAAC understands that the project may result in impacts on Indigenous communities' ability to practice fishing rights.

IAAC understands that for Aroland First Nation, Kashechewan First Nation, and Marten Falls First Nation, the project would result in temporary restriction of access to preferred fishing areas within the CDA. IAAC is of the view that the same temporary access restrictions may also affect Animbiigoo Zaagi'igan Anishinaabek First Nation, Eabametoong First Nation, and Fort Albany First Nation, who have indicated fishing on rivers that are crossed by the project, and in areas near the project, although IAAC is not aware of the specific locations of those fishing sites.

Following the implementation of mitigation measures described in Sections 2.1 and 4.3.1, IAAC acknowledges that the project is anticipated to lead to degradation and loss of fish habitat within or near the CDA, increased recreational fishing pressure, and a reduction of the availability of fish and opportunities to fish within the CDA. IAAC understands that habitat offsetting may not be possible within affected reaches or watersheds. IAAC is of the view that the project would displace fishing activities away from the CDA and into the

fish and fish habitat LSA and RSA, where fish would remain abundant, and where access restrictions are not anticipated.

As outlined in Section 4.3.3, the proponent indicated that the project would not change hydrological conditions and that, as a result, the release of methylmercury is not anticipated. However, ECCC, WCS, as well as Aroland First Nation, Attawapiskat First Nation, Fort Albany First Nation, Kashechewan First Nation, and Nibinamik First Nation expressed uncertainty that hydrological conditions would be maintained, and that methylmercury wouldn't be released.

IAAC is of the view that the project would cause limited to no residual effects on water quality that would harm fish populations. Section 2.1.4 describes the relevant mitigation measures and follow-up program for fish and fish habitat recommended by IAAC. Additionally, the proponent notes that water crossings will be designed to maintain local and downstream hydrology, minimizing the likelihood of formation and bioaccumulation of methylmercury. IAAC acknowledges that, even with the implementation of mitigation measures, fear of contamination may persist among land users, which may result in avoidance of fishing practices in waters understood to be hydrologically connected to the CDA. In response to these concerns, IAAC recommended in Section 2.1.4 the implementation of long-term water quality monitoring, including for methylmercury, in areas where country foods are harvested, until a three-year trend analysis demonstrates the project may not change the water quality. The follow-up program would be implemented in consideration of the views from Indigenous communities on monitoring design and analysis, and the proponent would share monitoring results with Indigenous communities. IAAC also recommends that monitoring results be compared to the Canadian Council of Ministers of the Environment's Canadian Water Quality Guidelines for the Protection of Aquatic Life to determine whether modified or additional measures are required.

IAAC is of the view that the project, in combination with reasonably foreseeable development (as described in Section 2.1) is likely to contribute to fish habitat loss and habitat degradation within respective CDAs, which are located in ecologically intact areas. The cumulative effects of these projects would additively contribute to a reduced ability of Indigenous communities to exercise rights to harvest fish and use water resources, particularly if these projects overprint preferred harvesting sites. IAAC is of the view that the cumulative effects would be relatively short term and partially reversible.

IAAC recognizes that the severity of project impacts on the right to harvest fish and use water resources vary by Indigenous community. See Tables 5 and 6 for IAAC's preliminary conclusions related to severity of impacts on rights. IAAC notes the importance of the implementation of proponent's proposed mitigation and follow-up program measures, and the recommended mitigation measures discussed in Sections 2.1, 4.3.1, and 4.3.2 (Fish and Fish Habitat, Current Use, and Physical and Cultural Heritage, respectively). Some of these measures are particularly critical to support Indigenous

Peoples' continued ability to exercise rights to harvest fish and use water, such as the implementation of the aforementioned follow-up program to verify the accuracy of the impact assessment and determine the effectiveness of mitigation measures with respect to effects to fish and fish habitat from changes in water quality; notifying Indigenous communities in the event of accidents or malfunctions during construction; and controlling sedimentation, run off and erosion; and the prevention of accidental spills.

4.4.4 Right to a Continued Way of Life

As supported under section 35 of the *Constitution Act, 1982*, Aboriginal rights include a range of cultural, social, political, and economic rights. Indigenous communities identified "way of life" rights as rights in respect of cultural continuity. This includes the persistence of their culture and land-based way of life through rights-based activities and practices for safeguarding cultural identity and language, maintaining spiritual connections to the land and sense of place, promoting community well-being, fostering the intergenerational transferring of knowledge within their traditional territories. It also includes stewarding the lands of their traditional territories in the communities' preferred manner. IAAC acknowledges that the evaluation of potential adverse impacts on the exercise of rights should consider the interconnected nature of Indigenous harvesting practices and Indigenous cultural continuity, even when these are individually assessed.

Aroland First Nation, Attawapiskat First Nation, Eabametoong First Nation, Ginoogaming First Nation, Marten Falls First Nation, Nibinamik First Nation and Weenusk First Nation shared that the condition of the land, water and the environment is critical to maintaining the communities' connection to and relationship with the land and the ability to retain and transmit Indigenous Knowledge, customs and cultural teachings, which together in turn are foundational to the communities' sense of healing and well-being.

The assessment of impacts on cultural continuity is below. The assessment considered contextual factors including pre-existing impacts and current socio-economic conditions that inform the exercise of the right to continued way of life. Table 4 provides the definition of each assessment criterion used to assign the severity of impact.

A brief summary of the potential interactions and pathways of the project's effects to the conditions that support the right of Indigenous communities to continue their way of life are outlined below. For a more comprehensive overview of the predicted effects of the project on Indigenous Peoples' current use of lands and resources, physical and cultural heritage, and health, social, and economic conditions, see Sections 4.3.1, 4.3.2, and 4.3.3, respectively.

Context in which impacts on the right to continued way of life would occur

All potentially impacted Indigenous communities shared, to varying degrees, that traditional ceremony and land-based activities, such as connecting to the land though harvesting, spending time in nature, and/or the intergenerational transfer of knowledge, are essential components of their right to a continued way of life. The land holds deep cultural, spiritual and practical significance for all potentially impacted Indigenous communities. Eabametoong First Nation, Marten Falls First Nation, Nibinamik First Nation and Weenusk First Nation described the value of the pristine quality of their traditional territories, where community members are able to experience freedom, tranquility, silence, and a sense of being in tune with nature. Weenusk First Nation described this isolation and freedom as key aspects of Weenuski Inninowuk (Weenusk First Nation members) identity. The expansive, remote, and isolated nature of Weenusk First Nation's traditional areas means that Weenuski Inninowuk have the freedom to travel and practice their way of life without interference or disturbance. Nibinamik First Nation community members spoke of the freedom of not being boxed into the streets of the city and instead the ability to go in any direction out on the land, where their senses can be at peace.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Eabemetoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation and Marten Falls First Nation describe having long histories with the Albany, Dusey, and Ogoki Rivers and emphasized their importance for traditional ceremony and land-based activities such as travel and harvesting. Fort Albany First Nation views the Albany River as having a central role in food security, cultural continuity, intergeneration knowledge transfer, and spiritual practices. Both Fort Albany First Nation and Kashechewan First Nation stressed the importance of the Albany River and indicated that they have been using them to travel at least as far as Marten Falls First Nation for countless generations. However, Fort Albany First Nation also noted that damming in the watershed has caused physical barriers and reduced water volume on the Albany River, making river navigation more difficult. Marten Falls First Nation described the Ogoki and Albany Rivers as natural highways, enabling the movement of people and goods across the region, noting they are essential for maintaining relationships with neighbouring communities and accessing hunting and fishing territories.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Eabametoong First Nation, Ginoogaming First Nation, Marten Falls First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation indicated that stewardship, conservation, and preservation of the lands and waters, which ensures that culturally important resources are available for future generations, are all critical to maintaining their community members' longstanding connection to the land and spirituality. Kitchenuhmaykoosib Inninuwug First Nation and Nibinamik First Nation described stewardship as more than a responsibility; it is a sacred obligation to protect and sustain lands, waters, and all living things. Weenusk First Nation noted that a part of stewardship involves passing cultural knowledge and land-based

teachings to younger generations, and that the community's histories and stories are directly tied to the lands and waters, and that the condition of the land and water directly facilitates Weenusk First Nation's way of life and ability to share Knowledge. A community member from Weenusk First Nation shared that understanding how to care for, and protect the land was not known from an early age; this knowledge came later as they explored their identity and passed these teachings and growth onto their own child. In this way, stewardship is tied very closely to the community member's identity. Several communities reported they are undertaking formal stewardship activities. For example, Long Lake #58 First Nation's is working to protect southern region moose populations, while Constance Lake First Nation has pursued an active role in monitoring and conserving caribou habitat through the purchase of a 1,500 km^2 tract of land.

All potentially impacted Indigenous communities have shared, to varying degrees, that the system of colonial rules, laws, and institutions imposed upon their communities has resulted in health, social and/or infrastructure crises. They indicated that they are facing lack of access to clean drinking water, high cost of living, housing shortages, low educational outcomes, high unemployment rates, high rates of addictions, and mental health struggles together have resulted in intergenerational trauma, the loss of language, culture, and traditional knowledge, and a weakened connection to the land. This has deeply impacted the communities' ability to exercise rights and practice the traditional way of life. In this context, protecting the land, and maintaining a connection to the land, the traditional way of life, and their traditional languages is regarded as critical for healing from past and present traumas. Marten Falls First Nation members have observed that within the last twenty-five years, there has been a decline in community members participating in harvesting activities due to economic, social, and political pressures, the impacts of climate change, and reduced transmission of Indigenous Knowledge.

Pathways of impact on the right to a continued way of life informed by consultations with Indigenous communities

Changes to the availability and quality of, and access to resources

IAAC anticipates that the project would decrease the availability of, and contribute to concerns about the decrease in the quality of culturally important resources, such as caribou, moose, furbearers, waterfowl, fish, and culturally important plants, that Indigenous communities harvest to maintain their way of life, and reduce safe access to lands and waters, as described in Section 4.3.1 (Current Use), Section 4.3.2 (Physical and Cultural Heritage) and above in Section 4.4.3 (Harvesting Rights, specifically changes to the availability, quality of and access to wildlife and fish resources). The current section discusses the availability and quality of plants, and safe access to plant resources which, in combination with the above-mentioned resources, are important for maintaining the right to a continued way of life through the persistence of Indigenous communities' culture and land-based practices.

All Indigenous communities noted, to varying degrees, the importance of harvested plants, which are used for food, as medicines, and/or for ceremonial purposes. The ability to harvest plants supports food security and the overall health and well-being of Indigenous communities and creates opportunities to be on the land and share Indigenous Knowledge.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Constance Lake First Nation, Eabametoong First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Nibinamik First Nation and Weenusk First Nation indicated that dust from construction and operation, as well as contaminated equipment and vehicles, spills and leaks, would reduce the availability and quality of medicinal, culturally important, and food plant resources. Aroland First Nation, Constance Lake First Nation, Ginoogaming First Nation, Kashechewan First Nation, Nibinamik First Nation, and Weenusk First Nation expressed concern regarding the potential adverse impacts on health consuming plants that have been covered with dust and/or herbicides, which could affect gathering practices. Kashechewan First Nation noted that community members may avoid plant gathering where pesticide, herbicide or chlorine-based dust suppressants may be applied or are perceived to be applied, or where dust is present on plants. However, the proponent notes that herbicides and pesticides will not be used for vegetation maintenance, and that non-chloride compounds will be used for dust suppression.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Ginoogaming First Nation, Marten Falls First Nation and Webequie First Nation raised concerns that the project's effects on the peatland/muskeg could harm plant communities and reduce the availability of culturally important plants. Animbiigoo Zaagi'igan Anishinaabek First Nation, Constance Lake first Nation, and Ginoogaming First Nation stated that peatlands are of utmost importance to their communities as a majority of identified traditional use plants grow in peatland ecosystems. Ginoogaming First Nation expressed concern that sacred old-growth forests and marshlands may be damaged or lost due to construction and operation of the road, noting that these ecosystems support most medicinal plants.

Constance Lake First Nation, Marten Falls First Nation, Nibinamik First Nation and Weenusk First Nation expressed concern that the presence of the road could lead to the introduction of invasive plant species that could displace native plant species of importance to Indigenous communities. Animbiigoo Zaagi'igan Anishinaabek First Nation and Constance Lake First Nation specifically expressed concern about the possible introduction and spread from Emerald Ash borer, which could damage or destroy culturally important Black Ash trees, resulting in profound cultural and intergenerational loss, particularly the traditional practice of basketry for Animbiigoo Zaagi'igan Anishinaabek First Nation.

Aroland First Nation, Constance Lake First Nation, Eabametoong First Nation, Marten Falls First Nation, Neskantaga First Nation, and Nibinamik First Nation also noted that the

increased presence of workers and visitors in the area of the project would increase harvesting pressure on plants, reducing their availability for Indigenous land-users. For Aroland First Nation in particular, reduced availability of wild blueberries due to overharvesting is a concern, as blueberry picking strongly supports cultural continuity while also serving as a key source of income for youth in the community. Nibinamik First Nation expressed concern that the construction and operation of the road may affect access to plant and medicine harvesting sites.

Changes to physical and cultural heritage and sites of importance

As described in Section 4.3.2, IAAC anticipates that the project could result in damage to physical and cultural heritage resources within the CDA and the LSA (defined as 2.5 km from the centreline on both sides of the proposed route), degradation (through sensory disturbance) of sites of importance (i.e., travel routes; harvesting sites; cultural, spiritual, and ceremonial sites; and burial sites) and change in access to sites of importance. Section 4.4.3 (Harvesting Rights) and the above section (Changes to the availability and quality of, and access to resources) describes the potential damage to and reduced safe access to sites of importance as they relate to exercising hunting, trapping, fishing and plant gathering rights.

Aroland First Nation, Animbiigoo Zaagi'igan Anishinaabek First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Long Lake #58 First Nation, Marten Falls First Nation, and Neskantaga First Nation expressed concern that the project could result in damage to or the loss of important physical and cultural heritage resources and sites of importance.

Ginoogaming First Nation confirmed that there are sacred sites and burial grounds located within or near the project corridor, which hold deep cultural and spiritual significance for the community. Animbiigoo Zaagi'igan Anishinaabek First Nation identified that cultural heritage sites are located in the vicinity of the southern half of the project, however, IAAC is not aware of the exact location of these sites in respect of the CDA. They also expressed concern that the project could damage historical sites and artifacts in the project area, including paintings that have existed for hundreds of years. Long Lake #58 First Nation expressed concerned that the project would lead to increased traffic in the area and impact historic trails, sites and areas of historic and future (resumed) use. Marten Falls First Nation and Nibinamik First Nation expressed concern that project construction activities such as aggregate extraction and blasting of rock could destroy burial, ceremonial, and sacred sites, and other important landscapes, including areas that are tied to oral histories. Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Eabametoong First Nation, Ginoogaming First Nation, Marten Falls First Nation, and Neskantaga First Nation identified sites of importance located within the CDA or LSA. They noted that they consider culturally important sites (e.g., burial grounds and travel routes) to be central to their cultural identity, language, community well-being, livelihood,

and to spiritual practices. These Indigenous communities shared that their ability to pass on Knowledge to future generations would be impacted through changes to the sites of importance, such as through physical damage to those sites (e.g., loss of historical artifacts and paintings), changes to access, and /or changes to the quality of experience at those sites (e.g., due to increased presence of outsiders or sensory disturbances) due to their deep cultural and spiritual significance tied specifically to these sites. Fort Albany First Nation stressed the importance of protecting these sites throughout construction and operations.

Eabametoong First Nation indicated an important trail intersects with the proposed route and would thus be impacted by the project. As described in Section 4.3.2, Neskantaga First Nation identified two historic trails that could be potentially impacted during the construction and the operations phases. It is IAAC's understanding that, to identify appropriate measures to minimize impacts to trails of heritage value, the proponent committed to conducting a further assessment of identified trails to determine their heritage value and the appropriate mitigation measures to protect their value.

Aroland First Nation, Fort Albany First Nation, Kashechewan First Nation and Marten Falls First Nation have expressed concern about impacts to the safe access to sites of traditional land use and cultural heritage located along the Albany, Dusey and Ogoki Rivers, which are areas of importance for the communities. Aroland First Nation shared that the Dusey River and Dusey Lake is an important cultural place, as community members have lived and practiced fishing, hunting, and harvesting in this area for generations, and it is home to numerous cultural sites and important habitats for fish and waterfowl. Aroland First Nation also expressed concerns about potential damage to, or destruction of two sites located within the LSA (a frequently used traditional family camp area near a planned waterbody crossing, and an archaeological site). Furthermore, as described in Section 4.4.3 (Hunting and Trapping Rights), Aroland First Nation noted that potential restrictions to sites and areas of significance for hunting, trapping, and fishing in vicinity of the waterbody crossing on the Ogoki River, could prevent harvesting activities support family and community cohesion through food sharing and intergenerational knowledge transfer. Marten Falls First Nation identified dozens of sites and features of physical and cultural relevance, including harvest areas, cultural, spiritual and sacred areas, habitation areas, and travel routes along the Ogoki and Albany Rivers, including 30 sites that will be directly overprinted by the project, and 71 that would be located within the LSA. Marten Falls First Nation were particularly concerned that sites that are overprinted by the road along the Ogoki and Albany Rivers would be disturbed, damaged, or lost.

Changes to tangible and intangible cultural heritage

IAAC anticipates that the project would result in changes to tangible and intangible cultural heritage by diminishing opportunities to share and strengthen Indigenous Knowledge for the safe and effective exercise of rights, and diminishing the ability to exercise

stewardship responsibilities, due changes to the availability and quality of resources, changes to access, and loss of sites of importance. The project would also result in changes to Indigenous communities' quality of experience, resulting in changes to cultural traditions, sense of place, mental well-being, and ability to transfer Indigenous Knowledge to future generations.

Aroland First Nation, Attawapiskat First Nation, Fort Albany First Nation, Kashechewan First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Marten Falls First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation expressed concerns that changes to wildlife habitat, mortality, health, distribution, and movement, and reduced access to or loss of preferred harvesting sites would affect the communities' ability to steward the lands, waters, and resources in their preferred manner. The Indigenous communities indicated that this could affect cultural continuity by impacting the transmission of Indigenous Knowledge, including language, to future generations. Kashechewan First Nation and Nibinamik First Nation indicated that project-related changes to their ability to steward the lands, waters, and resources that are required for the exercise of rights could be long-lasting and could adversely affect community well-being. Nibinamik First Nation expressed concern that there will be an increase in loss of language, cultural identity, and traditional place names through easier access. Aroland First Nation, Fort Albany First Nation, Kitchenuhmaykoosib Inninuwug First Nation, and Weenusk First Nation stated that a reduction in the ability to harvest resources, especially moose, caribou, waterfowl and fish, would limit the ability to share country foods among community members, an important tradition, which would lead to diminished community connectedness and well-being, and increasing reliance on store-bought foods. All of these effects (loss of language and impacts to community health and wellbeing) would also reduce opportunities to teach younger generations how to harvest these species, all of which would limit the ability to exercise harvesting rights and the ability to steward the lands in the communities' preferred manner.

Aroland First Nation, Attawapiskat First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Neskantaga First Nation, and Nibinamik First Nation raised concerns about the potential cumulative impacts to communities' way of life that could be caused by the project in combination with the proposed Webequie Supply Road and Northern Road Link projects and future development in the Ring of Fire area, including the potential for increased road traffic, mining, forestry, and hydroelectric development, and new settlement. Attawapiskat First Nation and Kitchenuhmaykoosib Inninuwug First Nation expressed concern that the cumulative impacts of the three proposed road projects would affect the ability to steward caribou due to potential adverse impacts on the seasonal ranges, habitat, and calving areas of caribou, which are central to the history, culture, and way of life of the Indigenous People in the region.

Attawapiskat First Nation raised concerns that the proposed construction of three road projects into the Ring of Fire area and the potential induced mining activity would set in motion a series of irreversible and cascading impacts that could permanently change Attawapiskat First Nation's way of life and exercise of rights. Eabametoong First Nation shared that the three proposed road projects, in combination with future development, represent the greatest range of opportunities and possible impacts to Eabametoong First Nation people and way of life since the making of Treaty 9. Eabametoong First Nation clarified that increased outsider use, including new mining claims and activities, will result in a further loss of their ability to steward their lands and pass on traditional teachings associated with harvesting. Nibinamik First Nation indicated that the three road projects will remain in the region forever and that they represent the first wave of an industrial revolution of the north that will have far reaching community-wide environmental, economic, and social impacts. Animbiigoo Zaagi'igan Anishinaabek First Nation noted that rights to cultural continuity may be adversely impacted by potential effects on physical and cultural heritage over time, recognizing that cultural heritage is not static and can be affected by ongoing access, land use changes, resource pressures, and increased third-party activity with implications for cultural identity, spiritual practices, and the intergenerational transmission of knowledge. Long Lake #58 First Nation shared that Elders have concerns that the three roads, particularly the project, may expose traditional hunting grounds, wetlands, and sacred or archaeological sites, including camps and burial areas, to public use and potential disturbance.

Indigenous communities shared that health of lands and waters underpins the ability to hunt, fish, trap, and gather, which in turn supports other cultural practices. Animbiigoo Zaagi'igan Anishinaabek First Nation, Attawapiskat First Nation, Aroland First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Marten Falls First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation noted concerns about project-related contamination of lands and waters, as well as poor air quality that may impact the safety of land users. They are concerned that this could lead to avoidance of traditional activities, which would diminish the ability to steward traditional lands in their preferred manner, sustain ceremonies and the spiritual and cultural connection to the land and water, and share customs, traditions, and Indigenous Knowledge across generations.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Constance Lake First Nation, Eabametoong First Nation, Ginoogaming First Nation, Kashechewan First Nation, Marten Falls First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation raised concerns that project construction and operation would adversely impact their experience on the land through sensory disturbance and visual landscape changes. Indigenous communities indicated that exercising harvesting and cultural rights in their preferred manner means experiencing peace, quiet, solitude and freedom while out on the land, and that the majority of land users would actively avoid areas with access restrictions, including fencing or signage, visible development, and

sensory disturbance. Nibinamik First Nation noted that the community has already experienced disruptions to traditional land, as noise from helicopters associated with mineral exploration has scared away moose, and expressed concern that the project would introduce additional noise, by facilitating further industrial development in the region.

Aroland First Nation, Fort Albany First Nation, and Marten Falls First Nation described the potential psychological impacts due to potential for noise and vibration associated with project construction and operation. This, in turn would have potential psychosocial and psycho-spiritual impacts such as a loss of sense of place, diminished mental health, and disruption to intergenerational transfer of cultural knowledge, which can further disconnect community members from land-based practices, impeding their ability to share, learn, and participate in cultural activities. Aroland First Nation shared that their community members have a strong psycho-spiritual connection to the land, and have identified the importance of the peace, quiet, and stillness of being in the bush to their well-being. Noise and vibration will likely impact this sense of well-being and lead community members to a reduction in the quality of their psycho-spiritual connection with the land.

Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Neskantaga First Nation, and Webequie First Nation expressed concern that community members would be discouraged or prevented from engaging in harvesting activities and cultural practices. They indicated that this could reduce opportunities to be on the land and to share Indigenous Knowledge with younger generations. They further identified several contributing factors, including an increased risk of road-related accidents, a greater presence of outsiders (including project workers), and increased access to drugs and alcohol. They also noted an elevated risk of harm to vulnerable populations, including women, children and youth, Elders, and 2SLGBTQ+ individuals. In their views, these impacts would negatively affect the safety, mental health and cultural cohesion of each of the communities. Marten Falls First Nation and Nibinamik First Nation noted that community members would have to leave their respective communities to obtain the education and training required to access employment opportunities presented by the project. These communities indicated that additional time away from the community would decrease community members' use of traditional language, which could have potential impacts social cohesion, intergenerational knowledge transfer and the ability to carry out cultural traditions.

IAAC's Assessment of Impact on the Right to a Continued Way of Life

IAAC is of the view that, after taking into account the implementation of mitigation measures, the project would likely result in residual and cumulative adverse effects on current use, physical and cultural heritage, and health, social, and economic conditions

through changes to the availability of resources, in particular of caribou, the quality of experience on the land, the ability to safely access resources, physical damage or degradation to sites of importance, and increased strain on social infrastructure and the ability to pass on Indigenous Knowledge (see Sections 4.3.1 through 4.3.3).

These changes would primarily affect communities that may exercise harvesting rights within the CDA and LSA, where wildlife availability is likely to be affected (see Section 4.3.1). These changes would also affect communities who harvest caribou within the caribou RSA, where their movement and distribution are likely to be altered, which may affect caribou availability at preferred harvesting sites. This would result in limiting Indigenous communities' ability to harvest and practice stewardship of caribou as a culturally important species and could affect the cultural and spiritual relationship between Indigenous communities and caribou. These effects impact Indigenous communities' rights to a continued way of life, including the ability to share harvesting-related Indigenous Knowledge, and to experience and steward the land in the preferred manner. IAAC acknowledges that adverse impacts to culturally important practices, including those tied to caribou harvesting, cannot be substituted with other aspects of Indigenous culture.

IAAC acknowledges that the aforementioned project effects would contribute the loss of inter-generational teaching of traditional practices and language through changes to the way in which Indigenous communities can practice their rights.

IAAC recognizes that project construction and operation could result in damage or degradation of important physical and cultural heritage resources and sites of importance to Indigenous communities. IAAC also recognizes that, should unidentified sites of physical, cultural, and historical importance to Indigenous communities overlap with project activities, these sites could be permanently lost or damaged once construction begins. IAAC understands that, in the event of chance finds, the proponent would be required to comply with Ontario's Ontario Heritage Act, in addition to the other mitigation measures identified in Section 4.3.2.4, to preserve the heritage value of archeological resources and minimize impacts on sites of importance.

IAAC acknowledges that the project would affect the quality of experience for Indigenous persons who practice traditional activities near or within the CDAs. These changes are likely to interfere with Indigenous Peoples' sense of connection to the land and waters, and with their ability to enjoy traditional practices in the preferred manner. IAAC also recognizes that the construction and operation of the project would lead to an influx of non-Indigenous workers and land-users in their traditional territories, which are likely to result in adverse impacts on community health, well-being, and the ability to practice harvesting and cultural rights in the preferred manner.

IAAC is of the view that the project, in combination with reasonably foreseeable physical activities, would modify the availability of caribou within the respective project LSAs and alter movement patterns and range areas within the project RSA. These changes may

further diminish Indigenous communities' ability and share knowledge and cultural practices related to caribou harvest, and the ability to steward the land, as described above. IAAC is also of the view that the project, in combination with reasonably foreseeable development, would facilitate access to remote Indigenous communities, raising safety risks for Indigenous community members (e.g., from violence towards Indigenous women and girls, and increased alcohol and drugs) which may deter community members from engaging in cultural practices, including the sharing of Indigenous Knowledge.

IAAC notes that through the ongoing Regional Assessment in the Ring of Fire Area, Indigenous communities would have access to information on current and future conditions within their traditional territory, which would be available to support and inform future decision-making in the Ring of Fire area. The Regional Assessment in the Ring of Fire Area aims to provide recommendations on how potential cumulative impacts on rights that cannot be fully addressed by project-specific mitigations could be accommodated through a suite of measures including funding, research, and data platforms, and other initiatives.

IAAC recognizes that the severity of project impacts on Indigenous communities' right to continue their way of life vary by Indigenous community. Table 4 provides the definition of the assessment criteria used to assign the level of impact for each rating criterion, and Table 5 and 6 provide IAAC's conclusions related to the severity of impact for each criterion. IAAC recognizes that establishing a working group between Marten Falls First Nation and Aroland First Nation to discuss matters as they pertain to the health, social, and economic conditions of Indigenous community members (as described in Section 4.3.3) and the implementation of mitigation and follow-up program measures described in Sections 4.3.1.4, 4.3.2.4, and 4.3.3.4 (e.g., scheduling project activities expected to reduce air quality and elevate noise levels in consideration of input from nearby Indigenous communities) are critical to supporting cultural continuity and the right to a continued way of life. These measures will minimize interactions with the project's adverse effects that prevent Indigenous community members from conducting cultural practices in their preferred manner. IAAC notes that the proponent plans to conduct further engagement with Indigenous communities to understand their cultural practices and needs, with the goal of developing and implementing further mitigation measures, as needed.

4.4.5 Governance and Stewardship

Animbiigoo Zaagi'igan Anishinaabek First Nation, Attawapiskat First Nation, Eabametoong First Nation, Ginoogaming First Nation, Fort Albany First Nation, Kashechewan First Nation, Nibinamik First Nation, and Weenusk First Nation raised concerns about potential impacts on the communities' ability to exercise decision-making and governance over their territories. Attawapiskat First Nation expressed concerns that the Crown and the

regulatory process for the project is imposing unilateral decision making over the Attawapiskat First Nation people. Ginoogaming First Nation shared that the impact assessment process limits governance rights as it prevents meaningful participation in decision-making. Nibinamik First Nation indicated that the community holds inherent rights of self-determination and self-government, and the right to participate in decisions that have the potential to affect Nibinamik First Nation and the lands, waters, or resources of its Homeland. Weenusk First Nation indicated that stewardship of the environment is closely connected to Weenusk First Nation's governance. Changes to stewardship, or ability to practice it, interfere with Weenusk First Nation's ability to govern and exercise stewardship over the environment and natural resources in Weenusk First Nation's traditional territory. Eabametoong First Nation characterized the exercise of governance and stewardship rights as integral to all land-based activities. Eabametoong First Nation shared that Treaty 9 was intended by the Indigenous signatories to reflect a co-management approach to resources, and that any road and resource development should be jointly governed. IAAC acknowledges concerns expressed by Indigenous communities regarding potential impacts of increased access from the project, in combination with the proposed Webequie Supply Road and Northern Road Link projects, as well as associated future development could affect their ability to maintain their stewardship and governance role in their territories. IAAC notes that the federal decisions on the assessment under the IAA is limited to the project and does not alter Indigenous governance systems. Future developments would be subject to separate legislative frameworks, assessment processes, and consultation requirements, including opportunities for Indigenous participation.

As part of the federal projects decision-making process under the IAA, the Crown seeks to avoid or minimize adverse impacts on the exercise of Indigenous rights and provides opportunities for Indigenous communities to participate in and inform decision-making through various methods. This can include providing participant funding, keeping communities informed of process steps and timelines, seeking opportunities for dialogue on potential impacts and how they could be addressed, including in person meetings, and providing individualized summaries regarding potential impacts to Indigenous communities.

IAAC also notes that the Regional Assessment in the Ring of Fire area is being conducted under the IAA and is co-led by First Nations and the Government of Canada, recognizing the importance of stewardship and the desire of First Nation Partners' communities to influence future activities within their territory. Through the Regional Assessment, Indigenous communities would have access to information on current and future conditions within their traditional territory, which would be available to support and inform future decision-making in the Ring of Fire area.

Based on the scope of the project and the evidence on the record, IAAC concludes that the project is not likely to result in adverse impacts on potentially impacted Indigenous

communities' existing governing structures. Furthermore, potentially impacted Indigenous communities will be consulted on the follow-up program for water quality monitoring and on the monitoring of the effects to wildlife species of importance for traditional purposes (as described in Section 2.1.4.2 and in Section 4.3.1.4), which will continue to provide opportunities for Indigenous communities to participate.

4.4.6 Conclusion on impacts on Indigenous Peoples' rights

The tables below outline the IAAC's understanding of what would constitute a low, moderate, or high impact on rights (Table 4), and provide a summary of IAAC's conclusions related to likelihood, geographical extent, frequency, duration, and reversibility, community health and wellbeing, and cumulative impacts on hunting and trapping rights, rights to fishing and water, and right to a continued way of life (Tables 5 and 6).

Should the project proceed, IAAC acknowledges that the project is likely to cause changes to the exercise of Aboriginal and treaty rights.

IAAC notes that the project, as well as potential future projects in the region, are located on provincial Crown land and would be subject to applicable provincial legislative and regulatory frameworks. Such projects would also be subject to relevant federal and provincial processes, including requirements for consultation with Indigenous communities.

IAAC further notes that future decisions would be informed by information and knowledge, including Indigenous Knowledge, as well as regional initiatives such as the Regional Assessment in the Ring of Fire Area. Through the ongoing Regional Assessment in the Ring of Fire Area, Indigenous communities would have access to information on current and future conditions within their traditional territory, which would be available to support and inform future decision-making in the Ring of Fire area. As such, the Regional Assessment is also intended to inform and improve the effectiveness and efficiency of future impact assessments conducted under the IAA and support other decision-making processes in a way that helps to:

- preserve Indigenous ways of life, traditions, laws, customs and oral history.
- protect and improve the environmental, health, social, cultural and economic conditions of potentially affected communities.
- protect and advance Aboriginal and Treaty rights, claims and interests within the assessment area.
- create opportunities for community and regional economic equity and sustainable development.

These processes provide opportunities for continued engagement with Indigenous communities and for the consideration of potential impacts on the exercise of rights in future decision-making.

With regards to the potential impacts on rights due to the project, IAAC concludes:

- Low to moderate severity of impacts on the right to hunt and trap, low severity of impacts on the right to fish, and low to moderate severity impacts on the right to a continued way of life for Indigenous communities that would be most directly impacted or reported some uses in the CDA: Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, and Marten Falls First Nation.
- Negligible to moderate severity of impacts on the right to hunt and trap, negligible to low severity of impacts on the right to fish, and negligible to moderate severity of impacts the right to a continued way of life for Indigenous communities whose preferred areas for the exercise of harvesting and cultural rights have limited overlap with the geographic scope of anticipated project effects: Attawapiskat First Nation, Constance Lake First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Long Lake #58 First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation.

Table 4: Degree of Severity for adverse impacts on rights of Indigenous Peoples

Severity Level	Rationale
Low	Factors influencing a finding of low level of severity include: • A resilient context; • Potential impact is unlikely but could occur; • Potential project effects have limited, or no overlap with areas of preferred use; • Potential project impacts are infrequent, fully or largely reversible by the operation phase, and impact duration is limited to the construction phase; • There is limited reasonably foreseeable development in the community's territory; • Indigenous communities have minor to no concerns about impacts from the project on health, including on country foods and drinking water; and

Severity Level	Rationale
	• Mitigation should allow for the practice of the right to continue in the same or similar manner.
Moderate	Factors influencing a finding of moderate level of severity include: • A moderately sensitive context; • Potential impact is likely but may not occur; • Potential project impacts overlap with known areas of preferred use; • Potential project impacts have intermittent frequency (several times per month), are partially reversible by the operation phase, and impact duration may last up to one generation; • There is some reasonably foreseeable development in the community's territory; • There may be impacts on health due to environmental effects or concerns about environmental effects of the project that are tied to species of importance to traditional diets, food security and drinking water, and socio-economic effects and which alter the exercise of rights; and • Mitigation may not fully address impacts but should enable the Indigenous community to continue exercising its rights in a modified way.
High	Factors influencing a finding of high level of severity include: • A highly sensitive context; • Potential project impact is highly likely or certain to occur; • Potential project impact has a regional scale of overlap with high value areas of preferred use; • Potential project impacts occur daily or are continuous and irreversible, with indefinite duration; • There are many proposed developments in the community's territory and a high level of existing disturbance; • The Indigenous community has serious concerns about impacts on holistic and/or traditional models of health, there may be serious impacts on health on a community-wide level due to environmental effects or concerns about environmental effects from the project that are tied to species of importance to traditional diets, food security and drinking water, and socio-economic effects;

Severity Level	Rationale
	• Concerns about effects to health interferes with, alters, or stops the meaningful exercise of rights; and • Mitigation is unable to fully address impacts such that the practice of the right is substantively diminished or lost.

Table 5: The Severity of Potential Impacts of the Project on the Exercise of Rights ranges from low to moderate for Indigenous communities that would be most directly impacted or reported some uses in the CDA: Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, and Marten Falls First Nation

Criteria	Values		
Historical context and cumulative impacts: Identification and understanding of the degree to which the existing exercise of rights may be vulnerable to project effects when the effects are added to, and interact with, the existing conditions, including existing cumulative effects from other sources	**Moderately sensitive context** Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, and Marten Falls First Nation indicate being heavily impacted by the system of colonial rules, laws, and institutions imposed upon their communities, which has resulted in health, social and infrastructure crises, including lack of access to clean drinking water, high cost of living, housing shortages, low educational outcomes, high unemployment rates, high rates of addictions, and mental health struggles. As a result, the communities have described how intergenerational trauma, along with the loss of language, culture, and traditional knowledge, and a diminished connection to the land, have impacted their communities' ability to exercise rights and practice the traditional way of life. These Indigenous communities continue to depend heavily on the land for food security as a source of traditional diet. They have already been impacted by past and ongoing development, such as mining and mineral exploration, water diversions, and forestry, as well as climate change, which have contributed to declines in the availability and quality of harvesting resources. This has impacted their ability to practice hunting, trapping, and fishing rights. Despite this, these Indigenous communities also indicate that they consider their environment pristine, where resources continue to be abundant, and the expression of harvesting and cultural rights continues.		
	Hunting and Trapping	**Fishing and Water**	**Continued Way of Life**
Likelihood: an estimation of the	**Potentially low**	**Potentially low**	**Potentially low**

Criteria	Values		
likelihood the impact would occur.	Project activities would have a low likelihood of impacting the exercise of hunting rights due to a reduction in the availability of wildlife for harvesting (in particular, for caribou, due to altered movement patterns, and habitat loss and disconnection). Project activities are unlikely to reduce the Indigenous communities' ability to access to preferred hunting areas outside of the CDA.	Project activities would have a low likelihood of reducing the quantity of fish available for fishing and changing the Indigenous communities' ability to access preferred fishing areas in their traditional territories.	Project activities would have a low likelihood of adversely impacting the continued practice of cultural and spiritual traditions and stewardship of lands and resources. Specifically, the project would potentially adversely impact species, sites or resources of cultural significance (e.g, caribou, and caribou harvesting sites) and the experience on the land as a result of adverse effects due to changes in resource availability due to altered movement patterns and range areas. This in turn adversely impacts irreplaceable and integral aspects of Indigenous cultural heritage.
Geographic Extent: includes the consideration of the geographic extent of the impacts in relation to the geographic extent of the right, as practiced.	**Potentially low** Project impacts on ungulates and furbearer availability would overlap with areas identified as important for hunting and trapping in the CDA, LSA and RSA for Aroland First Nation, Ginoogaming First Nation, and Marten Falls First Nation. For the other Indigenous communities, impacts may overlap with areas within the LSA where hunting practices may occur, although	**Potentially low** Residual effects on fish and fish habitat that would limit the availability of fish, and changes to access overlap fishing areas identified by Aroland First Nation, Kashechewan First Nation, and Marten Falls First Nation. For the other Indigenous	**Potentially low** The project may result in damage to, changes to the experience at, and change in access to, areas of cultural significance in the CDA. The project may also alter the ability to steward culturally significant resources (particularly caribou) within the LSA and extending into the caribou RSA.

Criteria	Values		
	specific locations of preferred hunting and trapping areas are not known.	communities, impacts within the CDA may overlap with preferred fishing areas, although specific locations are not known. The Indigenous communities can continue to utilize areas for fishing in the RSA and beyond.	
Frequency, Duration, Reversibility: Includes the consideration of how often the impact may occur within a given period of time, the length of time that an impact may be discernible, and whether the exercise of rights is expected to recover from the impact.	**Potentially low** Access restrictions to preferred hunting and trapping areas would be temporary, fully reversible and limited to the construction phase. Impacts on the exercise of hunting rights from project related changes to the availability of ungulates vary in space. Reduced ungulate availability is anticipated to be indefinite within the CDA and LSA. Within the RSA, changes to availability resulting from shifts in movement and migration patterns are not anticipated to extend beyond one generation.	**Potentially low** Project effects on fish and fish habitat that would limit the availability of fish for fishing are expected to be infrequent, primarily limited to project construction and to be partially reversible. Changes to the Indigenous communities' access to fishing sites would be temporary and reversible. Contamination of fish is unlikely.	**Potentially low** Use and sense of connection to a portion of the Indigenous communities' traditional territories that overlap with the CDA and LSA, and potential damage to sites of cultural importance within the CDA, has the potential to be continuous and irreversible, while effects beyond these areas would be reversible. Reduced access to culturally significant sites would be reversible and limited to the construction phase. Project impacts on cultural continuity (including intergenerational transmission of Indigenous Knowledge) and ability to steward the land within the CDA would be indefinite.

Criteria	Values		
Community Health and Wellbeing: Includes the consideration of physical, mental, emotional and spiritual health, including Indigenous views of health.	**Potentially low** The Indigenous communities expressed some concern about potential impacts of the project on health. Project-related effects to caribou and moose, which are species of importance to food security, would have a low likelihood of resulting in community-wide impacts on community health and well-being.	**Potentially low** The Indigenous communities expressed concern about potential project-related contamination of water, affecting food security, physical, mental, and spiritual health.	**Potentially low** The Indigenous communities identified potential impacts on health and well-being including reduced social cohesion, decreased food security, and impacts to mental health, but the exercise of the right to a continued way of life is unlikely to be meaningfully altered in the communities' traditional territories.
Cumulative Impact: Includes the understanding of the degree to which the meaningful exercise of rights may be impacted when project effects are added to and/or interact with effects from reasonably foreseeable activities	**Potentially low to moderate** The project is located in an undisturbed area. Cumulative effects are anticipated on woodland caribou (boreal population), within the Missisa, Nipigon, and Ozhiski, and Pagwachuan ranges, which are listed as "Threatened" under Ontario and Federal species at risk legislation. Cumulative effects to caribou are likely to be significant to a moderate extent, as a result of changes to species movement patterns, which would affect hunting due to resource availability at preferred locations. Cumulative impacts are anticipated to be potentially low for Animbiigoo Zaagi'igan	**Potentially low** The project is located in an undisturbed area. The project, in combination with other proposed projects, would contribute to fish habitat loss and degradation. However, IAAC anticipates that traditional fishing activities could continue within the respective proposed project RSAs.	**Potentially low to moderate** The project is located in an undisturbed area. Cumulative effects to social infrastructure (including substance use treatment, policing, and victim services) are likely to be significant to a moderate extent. Cultural continuity may be interrupted due to reduced capacity of social infrastructure to manage adverse effects of reasonably foreseeable development including increased risk of gender-based violence and access to drugs and alcohol. Impacts are anticipated to be moderate for communities that

Criteria	Values		
	Anishinaabek, and potentially low to moderate for Eabametoong First Nation, proportionate to the degree of overlap with potential cumulative effects to moose and identified harvesting areas. Cumulative impacts are anticipated to be low to moderate for the other Indigenous communities proportionate to the extent to which residual project and cumulative effects are anticipated to affect caribou availability, movement, and distribution.		will become road accessible (Marten Falls First Nation), and range from low, to low to moderate for those already on the road network (Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, and Ginoogaming First Nation). For the other Indigenous communities impact severity ranges from low (for Animbiigoo Zaagi'igan Anishinaabek First Nation and Kashechewan First Nation) to low to moderate (for Eabametoong First Nation, Fort Albany First Nation, and Ginoogaming First Nation) due to a reduced ability to maintain and share cultural practices and knowledge associated with ungulate harvest, proportionate to the extent to which residual project impacts and cumulative effects affect ungulates across communities' territories.
Overall conclusions on impacts on rights.	**Potentially low to moderate** Moderately sensitive context. Low impacts related to residual project effects: low likelihood of impacts on hunting rights, extent	**Potentially low** Moderately sensitive context, low likelihood of impacts on fishing rights, extent of impacts limited	**Potentially low to moderate** Moderately sensitive context. Low impacts related to residual project effects: low likelihood of impacts on rights,

Criteria	Values		
	of impacts on hunting is largely concentrated within CDA to the LSA but also extends into the caribou RSA, impact duration up to one generation, intermittent frequency, partially reversible, low impacts on community health and well-being. Low to moderate cumulative impacts. Mitigation should allow for the practice of the right to continue in a similar or modified way.	to CDA, impact duration largely limited to construction phase, partially reversible, and infrequent, low impacts on community health and well-being, and low cumulative impacts. Mitigation and follow-up program should allow for the practice of the right to continue in a similar manner.	impacts extending into the caribou RSA partially reversible to irreversible, low impacts on health and wellbeing. Low to moderate cumulative impacts. Mitigation should allow for the practice of the right to continue in a similar or modified way.

Table 6: The Severity of Impacts of the Project on the Exercise of Rights ranges from low to low-to-moderate for Indigenous communities whose preferred areas for the exercise of harvesting and cultural rights have limited overlap with the geographic scope of anticipated project effects: Attawapiskat First Nation, Constance Lake First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Long Lake #58 First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation

Criteria	Values
Historical context and cumulative impacts: Identification and understanding of the degree to which the existing exercise of rights may be vulnerable to	**Moderately sensitive context** Attawapiskat First Nation, Constance Lake First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Long Lake #58 First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation indicate being heavily impacted by the system of colonial rules, laws, and institutions imposed upon their communities, which has resulted in health, social and infrastructure crises, including lack of access to clean drinking water, high cost of living, housing shortages, low educational outcomes, high unemployment rates, high rates of addictions, and mental health struggles. As a result, the communities have described how intergenerational trauma, along with the loss of language, culture, and traditional knowledge, and a diminished connection to the land, have impacted their communities' ability to exercise rights and practice the traditional

Criteria	Values		
project effects when the effects are added to, and interact with, the existing conditions, including existing cumulative effects from other sources	way of life. These Indigenous communities continue to depend heavily on the land for food security as a source of traditional diet. They have already been impacted by past and ongoing development, such as mining and mineral exploration, water diversions, and forestry, as well as climate change, which have contributed to declines in the availability and quality of harvesting resources. This has impacted their ability to practice hunting, trapping, and fishing rights. Despite this, these Indigenous communities also indicate that they consider their environment pristine, where resources continue to be abundant, and the expression of harvesting and cultural rights continues.		
	Hunting and Trapping	**Fishing and Water**	**Continued Way of Life**
Likelihood: an estimation of the likelihood the impact would occur.	**Potentially negligible to low** Project activities are unlikely to reduce the quantity of wildlife available for hunting and trapping in the Indigenous communities' traditional territories and are unlikely to change the Indigenous communities' ability to access preferred hunting and trapping areas.	**Potentially negligible to low** Project activities are unlikely to reduce the quantity of fish available for fishing and are unlikely to change the Indigenous communities' ability to access preferred fishing areas in their traditional territories.	**Potentially negligible to low** Project activities are unlikely to disturb and disrupt the continued practice of cultural and spiritual traditions, including the stewardship of lands and resources within the communities' traditional territories.
Geographic Extent, Frequency, Duration, Reversibility: includes the	**Potentially negligible to low** The project effects within the CDA and the caribou and other wildlife LSAs do not intersect with areas	**Potentially negligible to low** Residual effects on fish and fish habitat that would limit the availability of fish overlap with Long Lake	**Potentially negligible to low** Project effects within the LSA would overlap with a culturally important site identified by Neskantaga First Nation but are not anticipated to overlap with

Criteria	Values		
consideration of the geographic extent of the impacts in relation to the geographic extent of the right, as practiced, how often the impact may occur within a given period of time, the length of time that an impact may be discernible, and whether the exercise of rights is expected to recover from the impact.	identified as preferred areas for hunting and trapping by the Indigenous communities. The Indigenous communities did report hunting for caribou within the caribou RSA, where project effects are anticipated.	#58 First Nation's traditional use area of interest, and Neskantaga First Nation's area of use. Project effects are not expected to overlap with other Indigenous communities' territories or areas identified as preferred for fishing.	areas or sites identified as culturally significant by the other Indigenous communities. The project may alter the ability to maintain cultural practices associated with harvesting within the RSA (due to changes in caribou distribution and movement, which would likely be reversed within one generation), and within the LSA, for communities that have indicated use within, or whose territories overlap the LSA: Long Lake #58 First Nation and Neskantaga First Nation
Community Health and Wellbeing: Includes the consideration of physical, mental, emotional and spiritual health, including	**Potentially negligible to low** The Indigenous communities expressed some concern about potential impacts of the project on health. Project-related effects on food security due to reduced availability of moose,	**Potentially negligible to low** The Indigenous communities expressed concern about potential project-related contamination of water, but the exercise of fishing rights in the communities' traditional territories is	**Potentially negligible to low** The Indigenous communities identified potential impacts on health and well-due to reduced time spent on the land, from sensory disturbances and a sense of disconnection from the land, but the exercise of the right to a continued way of life is unlikely to be altered in the

Criteria	Values		
Indigenous views of health.	caribou, birds and furbearers in the communities' traditional territories are unlikely.	unlikely to be altered in a meaningful way.	communities' traditional territories in a meaningful way.
Cumulative Impact: Includes the understanding of the degree to which the meaningful exercise of rights may be impacted when project effects are added to and/or interact with effects from reasonably foreseeable activities	**Potentially low to moderate** The project is located in an undisturbed area. Woodland Caribou are culturally important to and are harvested by the Indigenous communities. The project, in combination with other proposed projects, is likely to lead to potentially low to moderate impacts for Long Lake #58 First Nation, whose ability to harvest caribou has diminished due to industrial activity, and for Webequie First Nation, who's ability to harvest caribou will be strongly affected by reasonably foreseeable development. Impacts are anticipated to be low for the other Indigenous communities, as a result of cumulative changes to	**Potentially low** The project is located in an undisturbed area. The project, in combination with other proposed projects, is likely to contribute to fish habitat loss and degradation in a pristine region. However, IAAC anticipates that traditional fishing activities could continue within the respective proposed project RSAs.	**Potentially low to moderate** The project is located in an undisturbed area. Cumulative effects are likely to reduce the ability of social infrastructure to manage adverse effects of reasonably foreseeable development, including increased risk of gender-based violence and access to drugs and alcohol, which may decrease opportunities to engage in cultural practices that would lead to low severity of impacts. These cumulative effects would lead to a low impact severity for the Indigenous communities, except for Webequie First Nation, for whom impacts are anticipated to be low to moderate, as a result of higher potential exposure to the effects. Cumulative effects are likely to contribute to reduced ability to exercise way of life rights that are reliant on abundant wildlife, in particular, caribou.

Criteria	Values		
	caribou movement patterns and range areas.		
Overall conclusions on impacts on rights.	**Potentially negligible to moderate** Moderately sensitive context. Negligible to low impacts related to residual project effects: unlikely impacts on hunting rights, project effects on wildlife are not anticipated to extend into areas identified as preferred areas for hunting and trapping, low impacts on community health and well-being. Low to moderate cumulative impacts. Mitigation should allow for the practice of the right to continue in a similar or somewhat modified manner.	**Potentially negligible to low** Moderately sensitive context, unlikely impacts on fishing rights, effects are not anticipated to extend into areas identified as preferred areas for fishing, low impacts on community health and well-being, and low cumulative impacts. Mitigation and follow-up program should allow for the practice of the right to continue in the same or similar manner.	**Potentially negligible to moderate** Moderately sensitive context. Negligible to low impacts related to residual project effects: unlikely impacts on the right to a continued way of life, project effects have limited overlap with areas identified as culturally significant, low impacts on community health and well-being. Low to moderate cumulative impacts. Mitigation should allow for the practice of the right to continue in a similar or somewhat modified manner.

Based on the analysis of effects within federal jurisdiction and impacts on rights and the related mitigation measures identified in Sections 2.1 (Fish and Fish Habitat), 2.2 (Migratory Birds), 4.3.1 (Current Use), 4.3.2 (Structures, Sites and Things of Importance and Physical and Cultural Heritage) and 4.3.3 (Health and Socio-economic Conditions), IAAC is of the view that the potential impacts of the project on the exercise of section 35 rights of the above noted Indigenous communities have been adequately identified and appropriately mitigated or accommodated.

IAAC notes the importance of the proponent's ongoing and meaningful engagement to continue to understand and address the project's potential impacts on rights. The proponent committed to continued engagement with Indigenous communities to identify and develop further mitigation measures that are needed to address these impacts.

IAAC recognizes that consultation is ongoing. Input from Indigenous communities on the draft IA Report will be considered and will assist IAAC in finalizing its conclusions regarding potential impacts from the project on the exercise of section 35 rights.

5 Extent to which project effects contribute to Canada's environmental obligations

IAAC is of the view that the project effects would not contribute to Canada's environmental obligations due to its likely residual adverse effects on fish, migratory birds, and terrestrial wildlife, including some species at risk, as well as to wetlands.

IAAC conducted an analysis of the extent to which the likely effects of the project would contribute to Canada's ability to meet the following environmental obligations and identified the following biodiversity obligations as relevant:

- The Convention on Biological Diversity and Kunming-Montreal Global Biodiversity Framework and its domestic framework: Canada's 2030 Nature Strategy, as well as legislation supporting its implementation including SARA;
- Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar), as implemented in part under the Federal Policy on Wetland Conservation and the North American Waterfowl Management Plan; and

- Convention for the Protection of Migratory Birds in the United States and Canada, as implemented in part under the *Migratory Birds Convention Act, 1994*, and supporting conservation objectives from ECCC's strategies for Bird Conservation Regions.

5.1 Analysis

As described in Sections 2.1, 2.2, and 2.3, the project is likely to result in adverse federal effects on fish and fish habitat, on migratory birds, and on wildlife on federal lands, including species at risk listed under SARA or assessed as at risk by COSEWIC. Adverse changes to terrestrial wildlife, include effects to species at risk (woodland caribou – boreal caribou, woodland caribou – eastern migratory population, and wolverine) that support current use of lands and resources for traditional purposes by Indigenous Peoples as described in Section 4.3.1. In the relevant sections, IAAC recommended mitigation measures for these adverse federal effects and changes to wildlife. However, adverse effects to species at risk, including caribou and wolverine, are predicted to remain.

Furthermore, the project is likely to cause changes to other species at risk listed under Schedule 1 of SARA and occurring on provincial lands, including SARA-listed bird, bat, and insect species, largely from injury or death from collisions with vehicles, and additionally plant species, from habitat changes as described in the proponent's Impact Statement. Mitigation measures recommended in Section 2.2 to limit bird collisions would be suitable for minimizing harm to all aerial SARA-listed species. IAAC is of the view that habitat changes through habitat loss and sensory disturbance (such as noise) would displace the species to suitable habitats in other parts of the LSAs and RSAs. IAAC also acknowledges that the project may have adverse effects on eastern red bat, hoary boat, silver-haired bat, lesser yellow legs, short-billed dowitcher, snowy owl, suckley's cuckoo bumble bee and black ash assessed as at risk by COSEWIC. The mitigation and follow-up measures committed to by the proponent and recommended in relevant sections of this report would avoid or lessen adverse effects to SARA-listed species, monitor these effects, and would be consistent with the applicable recovery strategies and actions plans.

The project was designed to minimize its footprint, including on wetlands, through the project's route selection. In addition, design features such as the proponent's commitment to minimize disruption to terrain conditions, would limit changes to wetland function and wildlife disruption. The proponent also made the commitment that temporary construction infrastructure areas would be reclaimed as soon as possible following construction which would be implemented as part of the project's environmental management plans still to be further developed.

These measures would reduce the effects of the project's construction and operation on biodiversity, although project-related adverse effects are predicted to remain and that

would not contribute to Canada's ability to meet its environmental obligations related to biodiversity.

5.2 IAAC's rationale and conclusions

Based on the information above, IAAC is of the view that the likely effects of the project would not contribute to Canada's ability to meet its environmental obligations related to biodiversity.

6 Extent to which project effects contribute to Canada's climate change commitments

IAAC is of the view that the effects of the project are not likely to contribute to meeting Canada's climate change commitments due to its predicted greenhouse gas (GHG) emissions during construction and operation.

IAAC conducted an analysis of the extent to which the likely effects of the project would contribute to Canada's ability to meet the following climate change commitments:

- targets established under the *Canadian Net Zero Emissions Accountability Act*, including:
  - 2030 Emissions Reduction Plan: Clean Air, Strong Economy of reducing its GHG emissions at least 40% below 2005 levels by 2035,
  - Canada's 2050 net zero GHG emissions target, and
  - enable downstream domestic emissions reductions or displacement of higher-emitting sources.

6.1 Analysis

The project would emit GHGs during the construction phase and, to a lesser extent, during the operation phase. The estimated maximum annual GHG emissions from the construction phase of the project is 295,400 tonnes of carbon dioxide equivalent per year. The main GHG emission sources during this phase include construction mobile equipment, quarry and road blasting, and land-use changes. IAAC notes that the

construction of the road would also have an impact on peatland ecosystems and carbon storage. The proponent indicated that the floating road design would slow or stop peatland decomposition which may result in GHG emission reductions. With respect to carbon storage, ECCC noted that peatlands can be carbon sources or sinks depending on the site, with a high-level of uncertainty. The estimated maximum annual GHG emissions from the operations phase of the project is 44,000 tonnes of carbon dioxide equivalent per year. The main GHG emission sources during this phase include road traffic and land-use changes. ECCC noted that the proponent's estimated GHG emissions are adequately calculated, supported by sufficient information and considered relevant guidance and methodologies.

Although the GHG emissions would likely be very small in national terms and in terms of Canada's 2030 emissions target, the project would be a net source of emissions and the proponent acknowledges that residual emissions from the project would continue beyond 2050. The project type and location limit the measures and technologies available to reduce GHG emissions. ECCC acknowledges that the proponent's efforts to limit emissions from land-use change and biomass have the greatest GHG reduction potential.

The proponent also noted that the project, by providing infrastructure that supports creation of a critical mineral supply chain for advancing the green and digital economy, could contribute indirectly to Canada's ability to meet its climate change commitments in the long term. ECCC noted that this potential indirect long term contribution is only in a specific scenario where the project infrastructure would support critical mineral projects, where those projects would not have occurred without the project infrastructure, and where the materials are used directly in Canada to have a measurable reduction in downstream GHG emissions or displace higher-emitting sources.

6.2 IAAC's rational and conclusion

Based on the information above, IAAC is of the view that the likely effects of the project would not contribute to Canada's ability to meet its commitments in respect of climate change.

7 Extent to which project effects contribute to sustainability

The project's effects are likely to enhance overall economic and social well-being for Marten Falls First Nation and potentially other nearby Indigenous communities. The project's likely effects would also contribute to economic reconciliation and

self-determination of Marten Falls First Nation. However, the project would likely have residual adverse federal effects on the environment, on Indigenous traditional practices, and on community well-being. Overall, the project is likely to make a net positive contribution to sustainability. The extent to which the project's likely effects contribute to sustainability is low.

Sustainability is defined in the IAA to mean "the ability to protect the environment, contribute to the social and economic well-being of the people of Canada and preserve their health in a manner that benefits present and future generations." IAAC considered the adverse federal effects and positive effects of the project on components of the environment, on health, as well as on social and economic well-being as outlined throughout this report and focused its sustainability analysis on the following valued components and associated key issues:

- use of lands and resources for traditional practices by Indigenous Peoples, in the context of changes to the environment (fish and terrestrial wildlife) and Indigenous Knowledge transfer;
- community well-being, including as it relates to social infrastructure, continued way of life and identity;
- employment and economic conditions, including as it relates to the economic well-being of Indigenous communities as well as regional and provincial economies; and
- Indigenous economic reconciliation and self-determination, including the potential for net lasting gains related to increased economic opportunities.

The sustainability analysis considered how changes to these valued components and key issues may be experienced differently between groups within communities, different Indigenous groups, and across generations.

From a sustainability perspective, some of the project's effects may persist for several generations, particularly those related to Indigenous knowledge, cultural practices, and community health and well-being. Given that the project would operate indefinitely, IAAC considered a temporal boundary of 80 years for the sustainability analysis to take into account the construction and operation phase, as well as potential effects on the well-being of current and future generations. IAAC considered effects holistically at a broad, regional-level spatial boundary consisting of the RSA identified in Section 4.3.3 of this report.

7.1 Analysis

7.1.1 Interconnectedness and Interdependence of Human-Ecological Systems

The project is located within a territory with which the Anishinaabe people have maintained a deep and spiritual relationship for generations. This relationship has sustained their livelihood and shaped their way of life. This relationship forms the basis of the Anishnawbek concept of bimaadiziwin: a way of life that reflects the close spiritual connection between humans, the Earth and all living beings. IAAC considered that the potential effects of the project could affect this relationship over multiple generations due to the interconnectedness of its land, water, wildlife, and human components, and analyzed whether and how the effects of the project contribute to sustainability.

Project activities during the construction and operation of the road would permanently alter the land, as well as wildlife and aquatic resources within the traditional territories of Animbiigoo Zaagi'igan Anishinaabek First Nation, Aroland First Nation, Attawapiskat First Nation, Constance Lake First Nation, Eabametoong First Nation, Fort Albany First Nation, Ginoogaming First Nation, Kashechewan First Nation, Kitchenuhmaykoosib Inninuwug First Nation, Long Lake #58 First Nation, Marten Falls First Nation, Neskantaga First Nation, Nibinamik First Nation, Webequie First Nation, and Weenusk First Nation. These Indigenous communities practice traditional activities such as fishing, hunting, trapping, and plant harvesting in their traditional territories. These activities support the transmission of Indigenous Knowledge across generations, are deeply rooted in the cultures of Indigenous communities and are essential to preserving their traditional way of life. These activities also facilitate access to high-quality food at lower costs and help preserve traditional dietary habits. The likely degradation or loss of fish and wildlife habitats; the displacement of species that are important for fishing, hunting, and trapping; changes in the availability of game and other country foods; reduced safe access to sites for traditional activities; displacement of caribou as well as alterations of the landscape and quality of Indigenous experience would result from the project largely within the CDA.

Project activities during the construction and operation would also alter the human components of the ecosystem, notably by further straining Indigenous social infrastructure while also generating sustained economic benefits for Marten Falls First Nation and potentially for nearby Indigenous communities, such as Aroland First Nation. These benefits include employment and training opportunities during construction and long-term operation and maintenance. The project would also support Indigenous-led business development and procurement. Once in operation, the road would enhance physical access to Indigenous communities, regional mobility and labour force participation, facilitate access to education and training opportunities on and off reserve, and support community-driven economic initiatives for Marten Falls First Nation.

The project would result in improved year-round access to Marten Falls First Nation through connection to the provincial highway network. This would reduce the high cost of

living associated with the remoteness of the communities, enable more reliable delivery of goods and services, and support the development of new community infrastructure, including housing, health and education. Enhanced year-round connectivity would support Indigenous communities' ability to exercise greater control over their social, economic, and cultural development, including the planning and delivery of housing, health care, education, emergency services, and community infrastructure in accordance with their own priorities. By enabling Indigenous communities to more effectively participate in regional and provincial economies, the project would support economic self-sufficiency and community-led development, which are key elements of economic reconciliation. Collectively, these benefits would likely contribute to increased household incomes, improved social and economic conditions, and greater economic resilience for Marten Falls First Nation and potentially for nearby Indigenous communities, with positive effects expected to extend across generations.

The proposed road within this ecosystem would contribute to increased mobility of Indigenous communities and access to Indigenous reserves and traditional territories, which would present new economic and self-determination opportunities, but would also add strain on limited social infrastructure, as well as on traditional practices by Indigenous Peoples. An influx of non-indigenous peoples and workers would likely increase social tensions, introduce illegal or prohibited substances, undermine cultural and linguistic practices, and has the potential to increase violence in Indigenous communities, particularly against Indigenous girls and women.

7.1.2 Well-being of present and future generations

Based on the valued components identified for the sustainability analysis, IAAC assessed benefits and costs to the well-being of present and future generations in Table 7.

Table 7: Expected benefits and costs of the project to current and future generations by valued components

Sustainability Valued Component	Benefits to the well-being of current and future generations	Costs to the well-being of current and future generations
Use of lands and resources for traditional practices by Indigenous Peoples	Improved year-round access would facilitate reliable access to some remote areas of traditional territories and potentially support traditional practices in these areas.	The project's environmental effects, particularly effects on wildlife harvesting, such as fishing and hunting of caribou, game birds, moose and deer, could reduce harvesting success and quality of

Sustainability Valued Component	Benefits to the well-being of current and future generations	Costs to the well-being of current and future generations
		experience and, in turn, when and how Indigenous Knowledge is transferred to the next generation. Construction and operation of the road could disrupt traditional activities such as fishing, trapping, and plant harvesting, thereby affecting cultural and spiritual practices, as well as the transmission of Indigenous Knowledge across generations. Fear of contamination of country foods from project-related environmental effects, such as an accidental spill of hazardous material, may result in the avoidance of subsistence fishing, plant harvesting, hunting and trapping and of consuming wildlife in areas viewed as being contaminated by Indigenous communities. In turn, this could impact food security, and continuity in Indigenous culture and identity.
Community wellbeing	Improved year-round access would likely increase movement of people and families between communities in the region and could in turn revitalize these communities as well as strengthen family	Improved access would likely increase exposure to western influence, disrupt cultural practices, impact traditional ways of life, and Indigenous communities' abilities to pass on their culture to future

Sustainability Valued Component	Benefits to the well-being of current and future generations	Costs to the well-being of current and future generations
	and cultural ties, reduce isolation, and enable community-driven planning for health and education. The project would increase access to affordable goods and services and improve their distribution. The potential return of community members to the Marten Falls First Nation reserve could contribute to the region's economic development, trigger construction of new housing, and help improve and maintain community infrastructure.	generations as well as place additional strain, such as on social infrastructure for present and future generations. In addition, other communities, particularly the Municipality of Greenstone, could face additional pressure due to the influx of members of the Marten Falls First Nation traveling south to access services provided to Indigenous community members living in the region. An influx of workers may increase physical and sexual violence towards Indigenous women and girls. It could also lead to increased pressure on the social infrastructure of the Indigenous communities. Project-related population changes may increase social tensions, undermine social cohesion and elevate risks to community safety. The safety of Indigenous community members could also be compromised due to the increased risk of traffic accidents.

Sustainability Valued Component	Benefits to the well-being of current and future generations	Costs to the well-being of current and future generations
Employment and economic conditions	The project is expected to create direct employment during construction and for maintenance during operation, with associated on job training, apprenticeships, and skills development. Increased household incomes and employability, particularly for Marten Falls First Nation members living on reserve, could support greater financial autonomy and resilience. Over time, improved access could reduce the high cost of living due to the remoteness of the communities and enable broader participation in regional labor markets, benefiting future generations. The project involves significant upfront capital expenditures associated with construction, while the road operation would represent a long-lived transportation asset extending to multiple generations which would likely improve supply chain reliability under all seasonal conditions. The project would induce spending effects and employment within Ontario, with a concentration of	Economic benefits may not be evenly distributed within or among communities and may exacerbate income disparities. The project may reduce income from traditional economic activities, particularly the income generated by the sale of wild blueberries and commercial game hunting due to reduced harvesting success.

Sustainability Valued Component	Benefits to the well-being of current and future generations	Costs to the well-being of current and future generations
	economic benefits in Northern Ontario. Ongoing maintenance spending would contribute to provincial Gross Domestic Product (GDP) through the transportation construction sector and associated professional, technical, and service industries. By reducing logistical barriers, the project may also support broader economic participation by Indigenous communities and enable future investments consistent with community priorities, contributing incrementally to Ontario's and Canada's economic output.	
Indigenous economic reconciliation and self-determination	The project could support Indigenous economic reconciliation by enabling Indigenous-led business participation, procurement opportunities, and community-driven economic initiatives, primarily for Marten Falls First Nation. Improved year-round access would enhance the ability of Indigenous communities to exercise greater control over their social, economic, and infrastructure development, consistent with community priorities. These conditions	Adverse effects on lands, resources, and cultural practices may limit the extent to which economic gains translate into net improvements in self-determination.

Sustainability Valued Component	Benefits to the well-being of current and future generations	Costs to the well-being of current and future generations
	could support long-term self-determination and lasting economic gains across generations.	

7.2 IAAC's rationale and conclusion

IAAC assessed the project's contribution to sustainability considering the likely effects of the project and the concerns raised by the potentially impacted Indigenous communities, as well as the project's long-term potential to address persistent structural challenges faced by Marten Falls First Nation and other remote Indigenous communities, most notably geographic isolation, limited access to services, high costs of living, and limited economic opportunities.

IAAC acknowledges uncertainties regarding the potential adverse federal effects as well as benefits of the project for future generations, notably regarding the effectiveness of the recommended mitigation measures, Indigenous communities' willingness and capacity to participate in project-related opportunities, broader regional economic and market conditions, and future development, spending and investment in the region. Despite this, IAAC is of the view that the project's effects are likely to result in both positive contributions to sustainability and adverse federal effects of relevance to sustainability, with a positive balance of environmental, health, social and economic effects, primarily for Marten Falls First Nation. Provided recommended mitigation and enhancement measures are effectively implemented and supported by community capacity, economic benefits associated with durable transportation infrastructure, skills development, and improved mobility have the potential to accrue and compound over time. Sustainability gains would not be experienced across all communities or sub-groups, but mitigation measures recommended for adverse federal effects would enable communities to maintain economic, health and social well-being across generations.

IAAC concludes that the likely effects of the project would make a net positive contribution to sustainability to a low extent.

8 Decision making and next steps

Following the comment period on this draft IA Report and the draft potential conditions, IAAC will finalize this IA Report and potential conditions and provide them to the Minister of the Environment, Climate Change and Nature (the Minister) to inform decision making. The Minister may refer decision making to the Governor in Council. The decision maker will consider the information in this report and determine:

- after taking into account the implementation of any mitigation measures that the Minister or Governor in Council considers appropriate, whether the adverse federal effects indicated in the final IA Report (Sections 2 and 4.2) are significant, and, if so, to what extent they are significant; and
- if there are adverse effects that are likely to be to some extent significant, whether they are justified in the public interest taking into consideration the following factors:
  - the impact that the likely effects of the project may have on any Indigenous group and any adverse impact that those effects might have on Indigenous rights (Section 4);
  - the extent to which the likely effects of the project contribute to Canada's ability to meet its environmental obligations and its commitments in respect of climate change (Sections 5 and 6); and
  - the extent to which the likely effects of the project contribute to sustainability (Section 7).

Following this decision, the Minister will issue a decision statement to the proponent that:

- informs it of the decision and the reasons for the decision;
- includes any conditions that the Minister considers appropriate other than mitigation measures the implementation of which the Minister is satisfied will be ensured by another person or by a jurisdiction;
- sets out the period within which the proponent must substantially begin to carry out the project; and
- includes a description of the project.

If it is decided that any likely significant adverse federal effects are in the public interest, the project may require the following federal permits for specific activities:

- *Canadian Navigable Waters Act* work approvals;
- *Fisheries Act* authorization(s);
- SARA permit(s); and
- *Explosives Act* explosives license(s).

IAAC considered adverse effects from the legislation that are relevant to the project, but notes that only work approvals under the *Canadian Navigable Waters Act* are likely to be required. IAAC will continue to coordinate the federal permits required for the project.

Annexes

Annex A: IAAC's effects rating criteria

IAAC used the following criteria to describe the project's likely residual adverse federal effects and cumulative effects. Table B-1 provides definitions of effects rating criteria for each adverse federal effects. Table B-2 to B-8 provides the definitions of effects rating criteria that apply to all adverse federal effects.

Table A-1: Magnitude rating criteria for each federal effect

Valued component	Low	Moderate	High
Fish and fish habitat	Measurable change in fish or fish habitat during any life cycle stage that would not affect fish populations.	Measurable change in fish or fish habitat during any life cycle stage that would adversely affect fish populations.	Measurable change in fish or fish habitat during any life cycle stage that would severely reduce or eliminate fish populations.
Migratory birds	Measurable change in migratory birds during any life cycle stage that would not affect migratory bird populations.	Measurable change in migratory birds during any life cycle stage that would adversely affect migratory bird populations.	Measurable change in migratory birds during any life cycle stage that would severely reduce or eliminate migratory bird populations.
Current Use of Lands and Resources for Traditional Purposes	Changes to locations or resources, experience, or use of locations or resources for traditional purposes but changes would not prevent	Changes to locations or resources, experience, or use of locations or resources for traditional purposes that require change	Changes to locations or resources, experience, or use of locations or resources for traditional purposes that would prevent carrying out these activities.

	carrying out these activities.	in how activities would be carried out.	
Physical and Cultural Heritage	Change in experience with no adverse change in the heritage resource value.	Physical degradation and/or change in experience with adverse change in the heritage resource value.	Severe degradation and/or loss of the heritage resource value.
Structures, Sites and Things of Importance	Partial damage or degradation to structures, sites and things of importance, and/or change in safe access to them.	Major damage or degradation to structures, sites and things of importance, and/or reduced safe access to them.	Severe degradation or loss of structures, sites and things of importance, and/or loss of safe access to the structures, sites or things of importance.
Indigenous Health Condition	Changes in environmental conditions that would present measurable differences in exposures generally below health-based standards.	Changes in environmental conditions that would present measurable differences in exposures generally reaching health-based standards.	Changes in environmental conditions that would present measurable differences in exposures consistently exceeding health-based standards.
Indigenous social and economic Conditions	Change in demand, access to and availability of police services, educational institutions, employment opportunities and services or community infrastructure could generally be managed within the capacities of existing infrastructure or services.	Change in demand, access to and availability of police services, educational institutions, employment opportunities and services or community infrastructure would strain existing infrastructure or services.	Change in demand, access to and availability of police services, educational institutions, employment opportunities and services, or community infrastructure would overwhelm the capacities of existing infrastructure or services and affect availability of services

			in the Municipality of Greenstone.
Species at risk and eastern migratory caribou, and their habitat, on federal lands	Harm to species and their habitat, without measurable change to populations.	Harm to species and their habitat, that would adversely affect populations.	Harm to species and their habitat, that would severely reduce or eliminate populations.
Atmospheric environment on federal lands	Measurable change in which parameter levels generally remain below federal guidelines, limits or objectives.	Measurable change in conditions in which parameter levels generally meet federal guidelines, limits or objectives.	Measurable change in conditions in which parameter levels consistently exceed federal guidelines, limits or objectives.

Table A-2: Rating criteria for geographic extent (applicable to all effects)

Rating	Rating definitions
Low	Effect expected to be limited to the CDA
Moderate	Effect expected to extend into the local study area
High	Effect expected to extend to the regional study area

Table A-3: Rating criteria for timing (applicable to all effects)

Rating	Rating definitions
Low	Effect is expected to occur outside a sensitive period for fish or wildlife or For an Indigenous traditional activity, the effect is expected to occur outside the season for the traditional activity
Moderate	Effect is expected to occur occasionally during a sensitive period for fish or wildlife or For an Indigenous traditional activity, the effect is expected to occur occasionally during the season for the traditional activity

High	Effect is expected to occur throughout a sensitive period for fish or wildlife or For an Indigenous traditional activity, the effect is expected to occur throughout the season for the traditional activity

Table A-4: Rating criteria for frequency (applicable to all effects)

Rating	Rating definitions
Low	Effect expected to occur infrequently (i.e., no more than several times per year)
Moderate	Effect expected to occur intermittently (i.e., several times per month)
High	Effect expected to occur frequently (i.e., daily, almost daily, or continuously)

Table A-5: Rating criteria for duration (applicable to all effects)

Rating	Rating definitions
Low	Effect expected to occur for less than three years
Moderate	Effect expected to occur from three to five years
High	Effect expected to last over five years

Table A-6: Rating criteria for reversibility (applicable to all effects)

Rating	Rating definitions
Low	Effect would be fully or largely reversible by the operation phase
Moderate	Effect would be partially reversible by the operation phase
High	Effect would persist indefinitely

Table A-7: Rating criteria for social context (applicable to all effects)

Rating	Rating definitions
Low	Effect would have limited interaction with social values, conditions and historical context
Moderate	Effect would have considerable interactions with social values, conditions and historical context

High	Effect would have extensive interactions with social values, conditions and historical context

Table A-8: Rating criteria for ecological context (applicable to all effects)

Rating	Rating definitions
Low	The effect could alter the relationship between existing ecological systems with limited impacts, or the Indigenous interest has high resilience to the stressors that cause the effect
Moderate	The effect could alter the relationship between existing ecological systems and the receiving environment may adapt to the change, or the Indigenous interest has some resilience and may adapt to the stressors that cause the effect
High	The effect would alter the relationship between existing ecological systems and the receiving environment would not easily adapt to the change, or the Indigenous interest has low resilience and may not be able to adapt to the stressors that cause the effect

Table A-9: Rating criteria for uncertainty (applicable to all effects)

Rating	Rating definitions
Low	There is good understanding of the cause-effect relationship between the project and the valued component (VC), and sufficient data is available to support the effects assessment. The effectiveness of the selected mitigation measures is moderate to high. There is a low degree of uncertainty or bias associated with data inputs and/or modelling techniques, and variation from the predicted effect is expected to be low
Moderate	The cause-effect relationships between the project and the VC are not fully understood due to incomplete data and information. The effectiveness of mitigation measures may be moderate or high. Modelling predictions are relatively confident
High	The cause-effect relationships between the project and a VC are poorly understood. There may be several unknown external variables and/or incomplete data. The effectiveness of the mitigation measures may not yet be proven. Modelling results may vary considerably given the data inputs

Annex B: Consideration of section 22 factors

The table below lists the factors to be considered in an impact assessment (as set out in section 22(1) of the IAA). IAAC determined the scope of certain factors, including the extent of their relevance to the impact assessment of the project (as per subsection 18(1.2) of the IAA) as indicated below.

Table B-1: Consideration of section 22 factors

Factor to be considered (subsection 22(1))	Where reflected in this Report
(a) the changes to the environment or to health, social or economic conditions and the positive and negative consequences of these changes that are likely to be caused by the carrying out of the designated project, including (i) the effects of malfunctions or accidents that may occur in connection with the designated project; (ii) any cumulative effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out; (iii) the result of any interaction between those effects; (b) mitigation measures that are technically and economically feasible and that would mitigate any adverse effects of the designated project	Sections 2, 3, and 4.3
(c) the impact that the designated project may have on any Indigenous group and any adverse impact that the designated project may have on the rights of the Indigenous Peoples of Canada recognized and affirmed by section 35 of the *Constitution Act, 1982*	Section 4
(d) the purpose of and need for the designated project	Section 1
(e) alternative means of carrying out the designated project that are technically and economically feasible, including through the use of best available technologies, and the effects of those means	Section 1
(f) any alternatives to the designated project that are technically and economically feasible and are directly related to the designated project	Section 1

Factor to be considered (subsection 22(1))	Where reflected in this Report
(g) Indigenous Knowledge provided with respect to the designated project	Considered throughout this report, notably in Section 4.
(h) the extent to which the designated project contributes to sustainability	Section 7
(i) the extent to which the effects of the designated project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change	Sections 5 and 6 IAAC scoped this analysis to what was needed to inform the extent to which the effects of the project contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in respect of climate change.
(j) any change to the designated project that may be caused by the environment	Sections 2, 3, and 4
(k) the requirements of the follow-up program in respect of the designated project	Sections 2, 3, and 4
(l) considerations related to Indigenous cultures raised with respect to the designated project	Section 4, Annex(es)
(m) community knowledge provided with respect to the designated project	Sections 2 and 4
(n) comments received from the public	Section 2, Annex C
(o) comments from a jurisdiction that are received in the course of consultations conducted under section 21	Sections 2, 4, 5 and 6
(p) any relevant assessment referred to in section 92, 93 or 95	The ongoing Regional Assessment in the Ring of Fire Area was considered throughout this report as applicable,

Factor to be considered (subsection 22(1))	Where reflected in this Report
	notably the Regional Assessment Working Group interim report submitted on January 20, 2026, along with the information sharing platform. The Strategic Assessment of Climate Change was considered relevant to inform the extent to which the effects of the project hinder contribute to the Government of Canada's ability to meet its commitments in respect of climate change.
(q) any assessment of the effects of the designated project that is conducted by or on behalf of an Indigenous governing body and that is provided with respect to the designated project	Sections 2, 3, and 4 as informed by the proponent's Impact Statement.
(r) any study or plan that is conducted or prepared by a jurisdiction — or an Indigenous governing body not referred to in paragraph (f) or (g) of the definition jurisdiction in section 2 — that is in respect of a region related to the designated project and that has been provided with respect to the project	N/A
(s) the intersection of sex and gender with other identity factors	GBA Plus was applied in Section 4.3.3 of this IA Report.
(t) any other matter relevant to the impact assessment that the Agency requires to be taken into account	N/A

Annex C: Summary of public comments

Some participants expressed general support for the project, while others expressed disapproval. IAAC considered all comments received to draft this IA Report. Comments are summarized below.

- The project could have adverse effects on migratory birds and their habitat.
- The disruption of the peatlands from the project, especially in consideration of the floating road design, and the cumulative effect of future development in the Ring of Fire area could increase greenhouse gas emissions.
- There is concern about the cumulative effects of the project as a result of the potential for future development activities in the Ring of Fire area.
- The project could have positive economic and social impacts on the area, especially considering future projects in the area; however, enhancement measures will need to be in place for Indigenous Peoples and businesses to benefit.
- The project could adversely impact fish and fish habitat.
- There is not adequate information from the proponent about future access controls and road ownership, as well as on the relationship of the project to future development in the Ring of Fire area.
- The project could disrupt eskers and glacial deposits, which could lead to heavy metals entering into the environment and affecting the quality of country foods and medicinal plants.
- IAAC needs to ensure there is a collaborative and well-funded consultation process throughout the federal impact assessment that is informed by Indigenous Knowledge, takes a holistic approach to impacts on Aboriginal and Treaty rights, and considers the cumulative effects of both past and future projects in the Ring of Fire area.
- The project could have adverse impacts on Indigenous traditional practices, such as navigating waters, hunting, trapping, fishing, and harvesting, as well as cultural and spiritual practices and traditional economies.
- The project could have adverse impacts on water quality and quantity, which could also change the riparian and wetland environment.
- The project could adversely impact species at risk, including caribou.
- The impact assessment for the project needs to consider impacts to vulnerable populations, such as women, elders and youth, and people with disabilities.
- The impact assessment for the project needs to consider worst case scenarios for accidents and malfunctions.

- The impact assessment for the project needs to consider alternative means to carry out the project.
- There is concern about the lack of clarity from the proponent regarding the implementation of offsetting as a mitigation tool.
- The ability of Indigenous Peoples to exercise traditional practices, including passing on teachings, language and spiritual ceremonies could be negatively impacted when considering the cumulative effects of the project.
- There is concern that the effects analysis by the proponent seems to minimize the impacts of the project, notably the floating road design, and the potential use of the road for mining activity.
- The effects of the environment and climate change on the project need to be considered in the analysis as it pertains to flooding and future changes in freezing and thawing of the region.
- The impact assessment needs to consider sustainability and potential impacts to future generations of Indigenous Peoples that live in the area.
- The project could adversely impact vegetation.
- The project could adversely impact the economic feasibility of remote outfitters in the Ring of Fire area.

IAAC also received comments on the following themes that were outside the scope of the federal impact assessment:

- There is a need for a regional assessment in the Ring of Fire area to understand the potential impacts of development to the area.
- The Government of Ontario’s environmental assessment for the project and provincial permitting processes in the Far North.

IAAC shared these comments with the appropriate jurisdiction, as applicable.