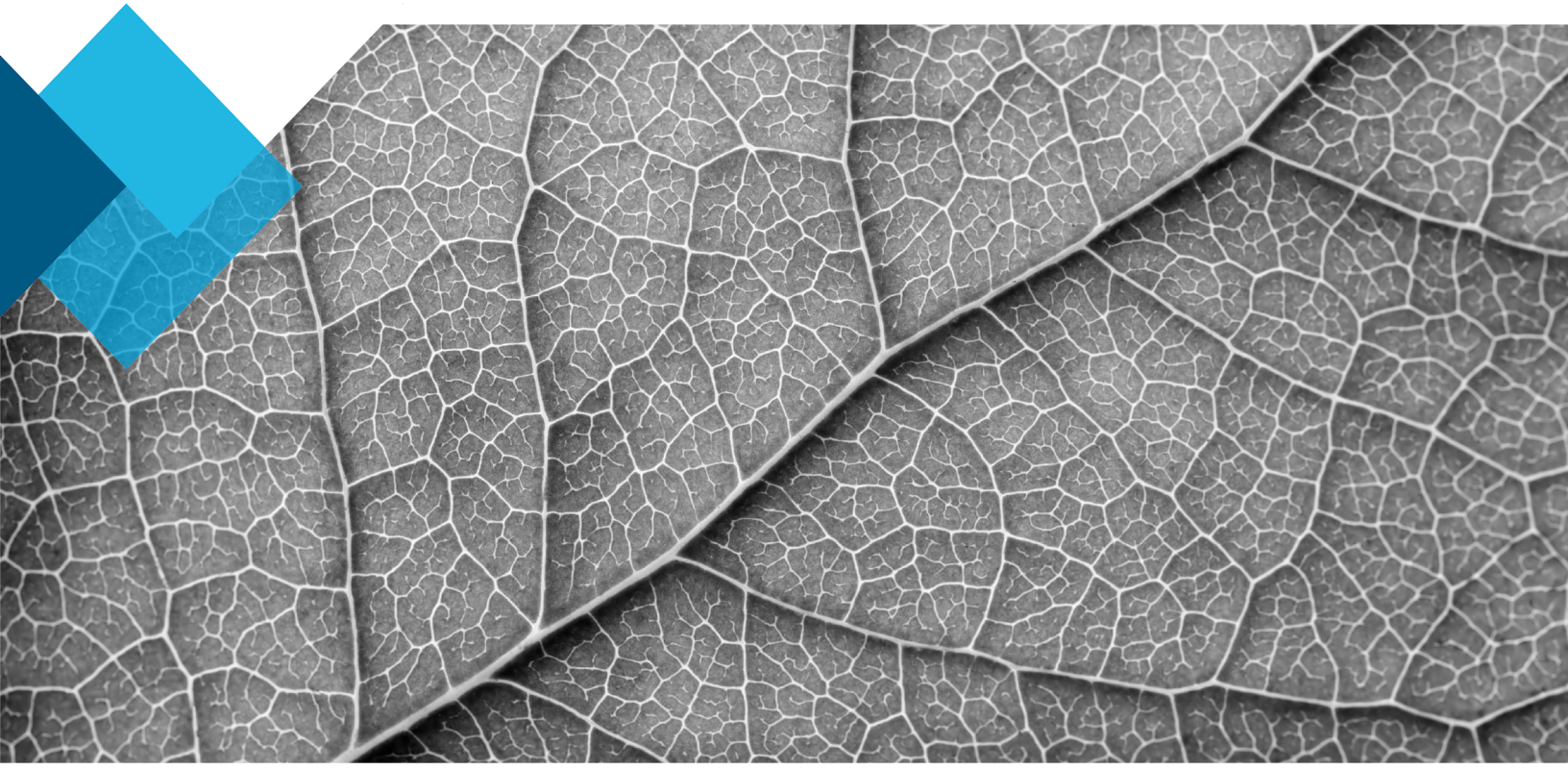
Northern Road Link

Initial Project Description

Marten Falls First Nation and Webequie First Nation



January 31, 2023

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NRL001-NRL-PR-RT-0007
NRL-Project IPD-2023-01-31-RevA

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The findings, conclusions, and recommendations in this report (i) have been developed in a manner consistent with the level of skill normally exercised by professionals currently practicing under similar conditions in the area, and (ii) reflect SNC-Lavalin's best judgment based on information available at the time of preparation of this report. No other warranties, either expressed or implied, are made as to the professional services provided under the terms of our original contract and included in this report. The findings and conclusions contained in this report are valid only as of the date of this report and may be based, in part, upon information provided by others. If any of the information is inaccurate, new information is discovered, site conditions change, or applicable standards are amended, modifications to this report may be necessary. The results of this assessment should in no way be construed as a warranty that the subject site is free from any and all contamination.

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List of Acronyms and Abbreviations

Term	Definition
AADT	Annual Average Daily Traffic
AAQC	Ontario's Ambient Air Quality Criteria
AFN	Aroland First Nation
ANSI	Areas of Natural and Scientific Interest
ARD/ML	Acid rock drainage/metal leaching
ARU	Acoustic recording unit
ASCRS	All-Season Community Road Study
ATFN	Attawapiskat First Nation
ATRI	Aboriginal and Treaty Rights and Interests
AZA	Animbiigoo-Zaagi'igan Anishinaabek First Nation
BTEX	benzene, toluene, ethylbenzene, and xylene
CAAQS	Canadian Ambient Air Quality Standards
CBLUP	Community-Based Land Use Plan
CCME	Canadian Council of Ministers of the Environment
CCPs	Comprehensive Community Plans
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COVID-19	Coronavirus disease
CSA	Canadian Standards Association
Dillon	Dillon Consulting Limited
DFO	Department of Fisheries and Oceans Canada
DPD	Detailed Project Description
DPM	Diesel Particulate Matter
EA	Environmental Assessment
EA Act	Ontario *Environmental Assessment Act*
EA/IA	Environmental Assessment/Impact Assessment
EAR	Environmental Assessment Report
EASR	Environmental Activity and Sector Registration
ECA	Environmental Compliance Approval
ECCC	Environment and Climate Change Canada
EDNA	Environmental DNA
ELC	Ecological Land Classification
END	Endangered
ENDM	Ontario Ministry of Energy, Northern Development and Mines (now Ministry of Energy, Ministry of Northern Development, and MINES)
ESA	*Endangered Species Act*
ESC	Erosion and Sediment Control
FNFNES	Ontario First Nations Food, Nutrition and Environmental Study

Term	Definition
GHG	Greenhouse Gas
GIS	Geographic Information System
HADD	harmful alteration, disruption or destruction
IA	Impact Assessment
IAA	*Impact Assessment Act*
IAR	Impact Assessment Report
ICE	Indigenous and Community Engagement
IK	Indigenous Knowledge
ILRU	Indigenous Land and Resource Use
IS	Impact Statement
ISO	International Organization for Standardization
KBM	KBM Resources Group
KWG	KWG Resources
LED	Light-emitting diode
LHINs	Local Integrated Health Networks
LiDAR	Light Detection and Ranging
LIO	Land Information Ontario
LRIA	*Lakes and Rivers Improvement Act*
LSA	Local study area
LUP	Land Use Plans
MBCA	*Migratory Birds Convention Act*
MCM	Ontario Ministry of Citizenship and Multiculturalism
MECP	Ontario Ministry of the Environment, Conservation and Parks
MFCAR	Marten Falls Community Access Road
MFFN	Marten Falls First Nation
MHSTCI	Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (now MTCS and MCM)
MINES	Ontario Ministry of Mines
MNDMF	Ontario Ministry of Northern Development, Mines and Forestry (now MINES and MNRF)
MNO	Métis Nation of Ontario
MNRF	Ontario Ministry of Natural Resources and Forestry
MOE	Ontario Ministry of the Environment (now MECP)
MOECC	Ontario Ministry of the Environment and Climate Change (now MECP)
MOI	Ontario Ministry of Infrastructure
MOU	Memorandum of Understanding
MTCS	Ontario Ministry of Tourism, Culture and Sport
MTO	Ontario Ministry of Transportation
NAPS	National Air Surveillance Program
NDMNRF	Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry (now Ministry of Northern Development, MINES, and MNRF)
NoC	Notice of Commencement
NO_x	nitrogen oxides
NRL	Northern Road Link

Term	Definition
the Project	the Northern Road Link Project
NSA	Noise Sensitive Areas
NSR	Noise Sensitive Receptors
OBBN	Ontario Benthic Biomonitoring Network
OPSS	Ontario Provincial Standard Specification
PDEM	Provincial Digital Elevation Model
POR	point of reception
PTO	Provincial Territorial Organizations
PTTW	Permit to Take Water
RoC	Record of Consultation
ROW	right-of-way
RSA	Regional study area
RSMIN	Red Sky Métis Independent Nation
RSO	Revised Statutes of Ontario
SAR	Species at Risk
SARA	*Species at Risk Act*
SC	Species of Concern
SNC-Lavalin	SNC-Lavalin Inc.
SOR	Statutory Orders and Regulations
SO_2	sulphur dioxide
SPT	Standard Penetration Testing
SWH	Significant Wildlife Habitat
SWOT	strengths, weaknesses, opportunities and threats
TAC	Transportation Association of Canada
the Agency	Impact Assessment Agency of Canada
THR	Threatened
TISG	Tailored Impact Statement Guidelines
ToR	Terms of Reference
TSP	total suspended particulate – particulate matter of aerodynamic diameter less than or equal to 30 microns
TSS	Total suspended solids
UOI	Union of Ontario Indians
US EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VC	Valued Component
VNS	Visual Nature Studio
WFN	Webequie First Nation
WSR	Webequie Supply Road

List of Units

Term	Definition
%	percent
d	day
dB	decibel
dBA	A-weighted decibels
Ga	giga-annum
h	hour
ha	hectare
km	kilometre
km^2	square kilometre
km/h	kilometre per hour
Kt	kilotonne
L	litre
L/d	litre per day
m	metre
mm	millimetre

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Appendices

Part A: General Information

Part A provides general information on the proposed Project.

Marten Falls First Nation (MFFN) and Webequie First Nation (WFN) are submitting the following Initial Project Description to the Impact Assessment Agency of Canada (the Agency) for the proposed Northern Road Link Project (the Project). Under the *Impact Assessment Act* (IAA), S.C. 2019, c. 28, s. 1, an Impact Assessment may be required for designated projects. A designated project includes one or more physical activities that are listed in the *Physical Activities Regulations* (commonly known as the Project List), as well as any physical activity incidental to those listed physical activities.

The Project is also subject to an environmental assessment (EA) under the Ontario *Environmental Assessment Act,* RSO 1990, c. E. 18[1] (EA Act). The communities of MFFN and WFN are remote Indigenous communities in northwestern Ontario and are not currently accessible by all-season roads. The proposed Project is a multi-use road between the proposed Marten Falls Community Access Road (MFCAR) and the proposed Webequie Supply Road (WSR) in Northern Ontario. The Project will connect the Ring of Fire mineral deposits in the McFaulds Lake area to the highway network via the MFCAR. It will also provide an opportunity to connect WFN to the highway network. The Project would enable economic activity by facilitating the transport of goods, services and resources. Project development is dependent on development of the proposed MFCAR project, as the Project needs to connect to MFCAR to reach the provincial highway network.

The Project is considered a designated project under the IAA (see Section 9) and as such MFFN and WFN, as proponents, are required to submit two documents during the Planning Phase, which will be used to inform the decision by the Agency on whether an Impact Assessment of the designated project is required. These documents are:

- An **Initial Project Description** of the designated project. The 180-day Planning Phase of the Impact Assessment process starts when the Agency posts a copy of the Initial Project Description on the Canadian Impact Assessment Registry Internet Site; and
- A **Detailed Project Description** of the designated project, which provides more detailed information about the designated project and updates the information provided in the Initial Project Description in response to issues raised by provincial jurisdictions, Indigenous groups, the public, federal authorities and other participants during consultations and engagement and includes the proponent's response to the Summary of Issues.

This Initial Project Description was prepared for the Project in accordance with the Agency's Guide to Preparing an Initial Project Description and a Detailed Project Description under the Federal IAA (the Agency, 2020). A Concordance Table to this guidance is provided in **Appendix A**.

[1] In addition to requirements under the Ontario *Environmental Assessment Act,* RSO 1990, c. E. 18, it is anticipated that the Project will be subject to an Impact Assessment (IA) under the federal *Impact Assessment Act*, S.C. 2019, c. 28, s. 1. The term "EA/IA" has been included to account for a coordinated provincial/federal process. The provincial/federal EA/IA reporting would be combined into a single provincial Environmental Assessment Report (EAR)/federal Impact Statement (IS) to create a single document for review. The term "EAR/IS" has been included to account for this possibility.

1 Project Name, Sector and Location

Project Name: Northern Road Link Project

Sector: Transport (All-season Road)

Proposed Location: The Project is a proposed multi-use all-season road between the proposed MFCAR and the proposed WSR, as shown on **Figure 1-1**. The south end of the Project is approximately 150 km north of the Municipality of Greenstone, 480 km northeast of Dryden, 400 km northeast of Thunder Bay, 510 km northwest of Timmins and 1,040 km northwest of Toronto. The north end of the Project is approximately 386 km northwest of Hearst, 300 km northeast of the Township of Pickle Lake, 283 km north of Nakina, and 260 km south of Peawanuck.

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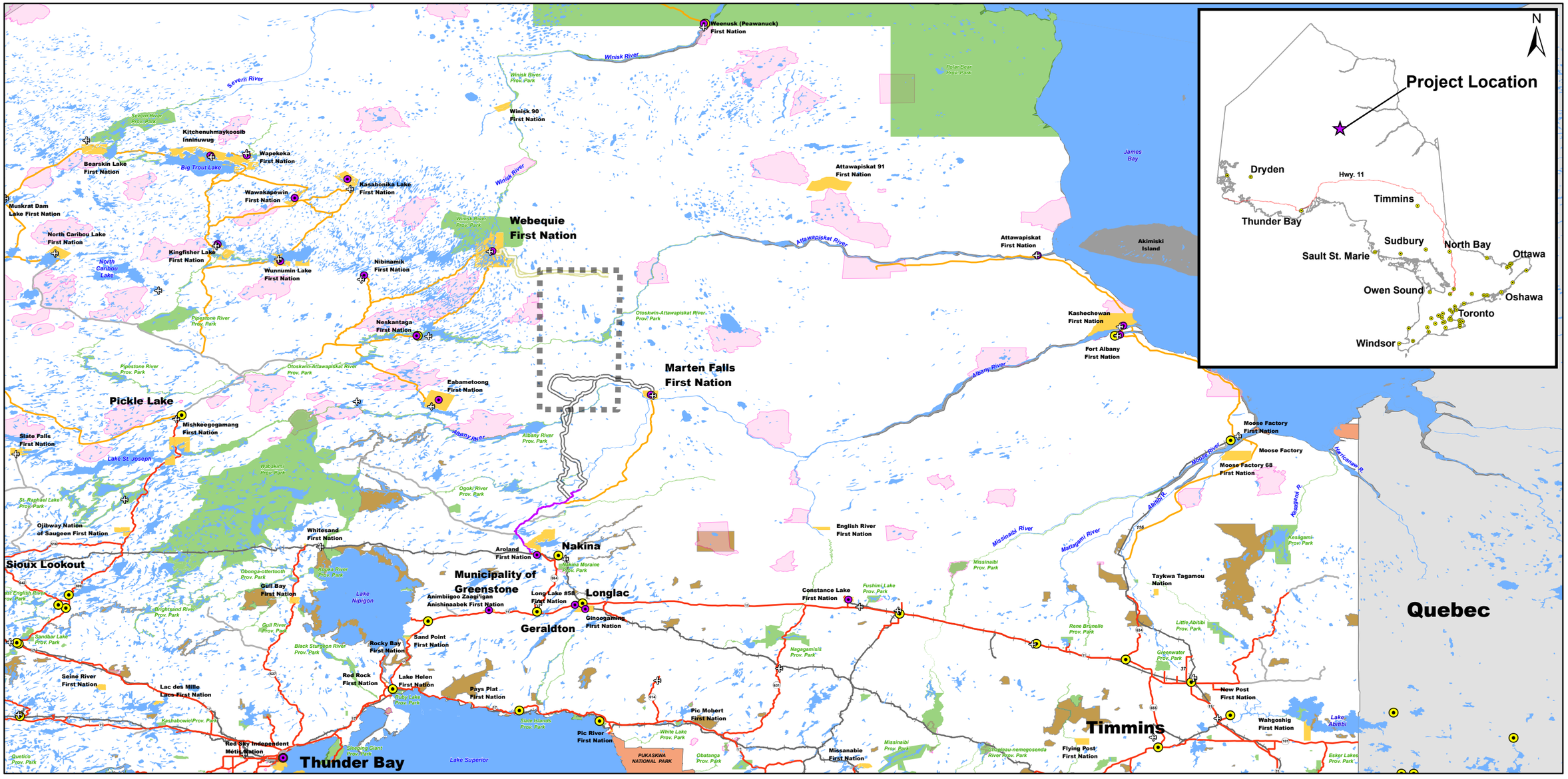

Legend:

- Project Location
- Airport
- Cities/Towns
- First Nation Reserve
- Indigenous Community Potentially Affected by or Interested in the Project
- Proposed Marten Falls Community Access Road (CAR) Alternatives
- Proposed Webequie Supply Road (WSR) Alternatives
- All-Season Road
- Winter Road
- Local Road
- Anaconda Road and Painter Lake Road
- Rail
- Federal National Park
- Provincial Park
- Areas of Natural and Scientific Interest (ANSI)
- Conservation Reserve
- Waterbody

NRL Northern Road Link

NOTES

1. Coordinate System: GCS North American 1983 CSRS.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04

DISCLAIMER

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Northern Road Link

Project Location and Context

Figure Number:		REV:
1-1		PA
Client: Marten Falls and Webequie First Nations	**Project Number:** 679878	**Date:** 2023-01-31

DSC	DRN	CHK	APP
The MECP identified the Indigenous Communities and groups that may be interested in or affected by the Project in a letter to Proponent (MECP, 2020a, provided as Appendix C)	AD	ND	ND

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2 The Proponent

This section provides the proponent's name and contact information and the name and contact information of the primary representatives for the purpose of the description of the Project.

2.1 Proponent Name

The proponents of the Project's Environmental Assessment/Impact Assessment (EA/IA) and preliminary design are MFFN and WFN, referred to collectively as 'the proponent' in this document. Proponent options for road ownership, operation/maintenance activities and liability are being considered in ongoing discussion with the Province of Ontario. These discussions will evolve during the development of the EA/IA.

It is recognized that should there be a change in Project proponency (i.e., a proponent other than MFFN and WFN takes ownership of the Project), all Project conditions, commitments and responsibilities agreed upon during EA/IA Planning Phase and the EA/IA, including proposed mitigation, would be transferred to the successor who would be the new proponent. A change in proponent has no bearing on type and level of detail of the information and studies required in documentation and submissions prepared for the EA/IA process.

Funding for the costs of the EA/IA for this Project is being provided by the Province of Ontario.

2.2 Proponent Contact Information

Table 2-1 provides general contact information for the Proponent and contact information for the purposes of this Initial Project Description.

Table 2-1: Proponent Contact Information

Proponent	General Contact Information	Contact Information for Purposes of the Initial Project Description
Marten Falls First Nation	Chief Bruce Achneepineskum General Delivery Ogoki Post ON P0T 2L0 807-349-2509 bruce.achneepineskum@gmail.com	Qasim Saddique Project Co-Lead Indigenous Engagement and Consultation 699 Mountain Road Fort William First Nation, ON P7J 1C1 416-830-6544 info@northernroadlink.com
Webequie First Nation	Chief Cornelius Wabasse Webequie First Nation P.O. Box 268 Webequie, ON P0T 3A0 807-353-6531 corneliusw@webequie.ca	Michael Fox Project Co-Lead Indigenous Engagement and Consultation 699 Mountain Road Fort William First Nation, ON P7J 1C1 807-472-6147 info@northernroadlink.com

The Project website is www.northernroadlink.ca

The proponent has assembled a team that consists of two Project Co-Leads and the Working Group. Each community has appointed one Project Co-Lead to manage and lead the process under the direction of the Working Group. The Working Group consists of four members, two from each community, and they provide overall strategic direction directly to the two Project Co-Leads. The Working Group also reports to the Chiefs and Councils of the two First Nations, and they are supported by the two Co-Leads in doing so.

Project Co-Leads

- Qasim Saddique, Suslop Inc., MFFN Lead
- Michael Fox, Indigenous & Community Engagement (ICE) Inc., WFN Lead

Working Group

- Lawrence Baxter, MFFN Representative
- Alanna Downey Baxter, MFFN Representative
- Roy Spence, WFN Representative
- Gordon Wabasse, WFN Representative

3 Consultation and Engagement with Jurisdictions and Other Parties

This section identifies jurisdictions or other parties consulted during the development of the Project, and summarizes consultation and engagement undertaken with jurisdictions or other parties including the public, to date, as of December 2022. The summary provides the results of consultation and engagement activities, including consultation and engagement during the development of the Terms of Reference (ToR) for the provincial EA and this Initial Project Description, the key issues raised, and future planned engagement activities moving forward. It is noted that MECP has provided additional time to December 14, 2022 for Indigenous communities to provide review comments on the Proposed ToR. The additional time was provided by MECP at the request of some Indigenous communities for more time to carry out a thorough review of the Proposed ToR.

It is noted that since the Project's provincial EA process started (i.e., Term of Reference stage), the names of several Ontario ministries have changed, some multiple times. The most current names of the ministries are used throughout the document for consistency unless it changes the context of the narrative[2].

3.1 Jurisdictions and Other Parties Identified for Consultation and Engagement

3.1.1 Provincial and Federal Government Agencies

The following government agencies have been consulted during the preparation of the provincial ToR and this Initial Project Description:

› Provincial Agencies:

- Ontario Ministry of the Environment, Conservation and Parks;
- Ontario Ministry of Mines;
- Ontario Ministry of Natural Resources and Forestry;
- Ontario Ministry of Northern Development;
- Ontario Ministry of Transportation;
- Ontario Ministry of Indigenous Affairs;
- Ontario Ministry of Economic Development, Job Creation and Trade;
- Ontario Ministry of Municipal Affairs and Housing;
- Ontario Ministry of Citizenship and Multiculturalism;
- Ontario Ministry of Tourism, Culture and Sport; and
- Ontario Provincial Police.

› Federal Authorities:

- The Agency;
- Environment and Climate Change Canada;
- Fisheries and Oceans Canada;
- Indigenous Services Canada; and
- Transport Canada.

[2] Cited documents will use the name of the ministry at the time of the publication of the document.

3.1.2 Municipalities

The following Municipalities have been consulted during the preparation of the provincial ToR and this Initial Project Description:

- City of Thunder Bay;
- City of Timmins;
- Municipality of Greenstone;
- Municipality of Sioux Lookout; and
- Township of Pickle Lake.

3.1.3 Public and Stakeholders

The following stakeholders have been consulted during the preparation of the provincial ToR and this Initial Project Description:

- Residents of the cities and municipalities of Greenstone, Thunder Bay, Timmins, Township of Pickle Lake, and Sioux Lookout;
- Those with recreational interests (e.g., hikers, campers, hunters, fishers, boaters);
- Environmental groups (e.g., non-Governmental organizations);
- Camp operators and outfitter businesses;
- Other interested businesses (e.g., recreational tourism businesses, trappers);
- Resource users (e.g., forestry, trappers, mining and mineral tenure holders in the area, including Ring of Fire Metals);
- Other interests (e.g., Chamber of Commerce); and
- Interested persons who ask to be added to the Project contact list.

3.2 Summary of Consultation and Engagement Activities to Date and Key Issues Raised

Table 3-1 provides a summary of consultation and engagement activities that have been completed to date with jurisdictions and other parties, including the public.

Table 3-1: Consultation and Engagement Activities to Date

Activity	Delivery Method	Date	Stakeholder
Website – set-up and updates	Website	April 2021 – ongoing	General public
Social media pages – set-up and updates	Social Media	May 2021 – ongoing	General public
Regular Environmental Assessment (EA) Coordination Meetings with provincial agency and federal authorities	Online Meetings	Commenced February 2021 and will occur for the duration of EA and Impact Assessment (IA)	› MECP › NDMNRF (now MINES and MNRF) › MTO › The Agency
Newsletter #1	Website and Email	April 19, 2021	› General public and Project Contact List

Activity	Delivery Method	Date	Stakeholder
Notice of Commencement of the Terms of Reference (ToR) for the provincial EA process	Mail and Social Media	May 4, 2021	Complete list of recipients provided in **Appendix B**
Notice of Commencement of the ToR for the provincial EA process	Newspaper Ads (Anishinabek News [online], Geraldton Times Star, Northern Ontario Business [online], Sioux Lookout Bulletin, TBNews Watch, Thunder Bay Chronicle Journal, Thunder Bay Source, Timmins Daily Press, Wawatay News [online], and Windspeaker [online])	May 4, 5 , 6 and 8, 2021	General public
Live Stream/Radio Show – Introduction to the ToR	Virtual and Radio	June 2, 2021	General public
Live Stream/Radio Show – Contents of the ToR	Virtual and Radio	June 16, 2021	General public
Live Stream/Radio Show – ToR Consultation Plan	Virtual and Radio	June 30, 2021	General public
Notice of Public Open House #1	Email and Social media	August 31, 2021	General public
Notice of Public Open House #1	Media advertising (Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout Bulletin, Geraldton Times Star, Thunder Bay Source, Anishinabek News, Northern Ontario Business)	September 7, 8 and 9, 2021	General public
Newsletter #2	Website and Email	September 1, 2021	General public and Project Contact List
Public Open House #1 – included newsletter, survey, panels for discussion and presentation – for upcoming release of the Draft ToR	In-person (Thunder Bay) and Virtual	September 14 and 15, 2021	General public
Public Open House #1 Surveys	Via SurveyMonkey application and hardcopy at the Open House	September 2021	General public
Newsletter #3	Website and Email	November 15, 2021	General public and Project Contact List
Notice of Draft ToR for Review	Mail and Social Media	November 24, 2021	General Public

Activity	Delivery Method	Date	Stakeholder
Notice of Draft ToR for Review	Media advertising (Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout, Geraldton Times Star, Anishinabek News, Northern Ontario Business, Wawatay News, Windspeaker)	November 24, 2021	General Public
Comment period on Draft ToR	N/A	November 24, 2021 to January 31, 2022	Provincial agencies and federal authorities: › The Agency › Health Canada › Indigenous Services Canada › MECP › ENDM (now MINES) › MNRF › MTO › MHSTCI (now MCM and MTCS) Stakeholders: › Wildlands League › Mineral Rights Holder
Live Stream/Radio Show – Draft ToR Review Sessions	Virtual and Radio	December 13, 2021	General public
Live Stream/Radio Show – Draft ToR Review – Where are we in the ToR and what comes next?	Virtual and Radio	January 19, 2022	General public
Newsletter #4	Website and Email	January 25, 2022	General public and Project Contact List
Live Stream/Radio Show – Themes of Comments Received	Virtual and Radio	February 2, 2022	General public
Notice of Public Open House #2	Media advertising (Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout, Geraldton Times Star, Thunder Bay Source, Anishinabek News, Northern Ontario Business, Wawatay News, Windspeaker)	February 9, 2022	General public
Public Open House #2 Virtual Room	Virtual	February 9, 2022	General public

Activity	Delivery Method	Date	Stakeholder
Notice of Public Open House #2	Email and Social Media	February 11, 2022	General public
Live Stream/Radio show – Federal Process	Virtual and Radio	February 16, 2022	General public
Public Open House #2	Virtual	February 23 and 24, 2022	General public
Public Open House #2 Surveys	Via Online Surveys in Virtual Reality Open House	February 2022	General public
Live Stream/Radio Show – The Initial Project Description and Detailed Project Description (DPD)	Virtual and Radio	March 2, 2022	General public
Live Stream/Radio Show – DPD	Virtual and Radio	March 16, 2022	General public
Live Stream/Radio Show – Proposed ToR	Virtual and Radio	March 30, 2022	General public
Radio Show – Submission of the Proposed ToR	Radio	April 13, 2022	General public
Live Stream – Northern Road Link (NRL) Announcement with Premier Doug Ford and Minister Rickford	Virtual and Radio	April 14, 2022	General public
Notice of Proposed ToR	Media advertising (Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout, Geraldton Times Star, Anishinabek News, Northern Ontario Business, Wawatay News, Windspeaker)	April 27, 2022	General public
Live Stream/Radio Show – Geology, Terrain and Soils	Virtual and Radio	April 27, 2022	General public
Notice of Proposed ToR	Mail and Social Media	April 29, 2022	General public
Live Stream/Radio Show – Waterfowl and Breeding Birds	Virtual and Radio	May 11, 2022	General public
Live Stream/Radio Show – Fish and Fish Habitat	Virtual and Radio	May 25, 2022	General public
Live Stream/Radio Show – Groundwater and Surface Water	Virtual and Radio	June 8, 2022	General public
Newsletter #5	Website and Email	June 10, 2022	General public and Project Contact List
NRL Showcase at Prospectors and Developers Association of Canada	In-Person (Toronto)	June 14-15, 2022	Conference attendees

Activity	Delivery Method	Date	Stakeholder
Live Stream/Radio Show – Air, Noise and Vibration	Virtual and Radio	June 22, 2022	General public
Newsletter #6	Website and Email	August 24, 2022	General public and Project Contact List
Newsletter #7	Website and Email	October 17, 2022	General public and Project Contact List
Live Stream/Radio Show – Proposed EA ToR comments- Climate Change and Water	Virtual and Radio	October 17, 2022	General public
Newsletter #8	Website and Email	October 27, 2022	General public and Project Contact List
Live Stream/Radio Show – Proposed EA ToR comments- EA Process and EA Higher-Level Comments	Virtual and Radio	October 31, 2022	General public

Appendix C provides additional information on consultation and engagement with jurisdictions and other parties, including the public, as following:

- **Table C-1** summarizes consultation and engagement with federal authorities and provincial agencies, by agency, and the result of these activities.
- **Table C-2** summarizes consultation and engagement with the public and stakeholders, by party, and the result of these activities.

Appendix D summarizes key issues raised to date during the ToR stage of the provincial EA process and the proponent's responses to these issues as following:

- **Table D-1** summarizes key issues raised by provincial agencies and federal authorities, including:
  - Assessment Methods;
  - Assessment of Alternative Mean/Methods;
  - Attawapiskat River;
  - Class Environmental Assessments;
  - Climate Change;
  - Commitments;
  - Community Safety;
  - Consultation and Engagement;
  - Cultural Heritage Resources;
  - Cumulative Effects;
  - Gender Based Analysis Plus;
  - Indigenous Knowledge;
  - Parks and Protected Areas; and
  - Species at Risk.

› **Table D-2** summarizes key issues raised by stakeholders and the public, including:

- Alternatives to the Project;
- Assessment Themes;
- Climate Change Resilience;
- Consultation and Engagement;
- Cumulative Effects;
- Project Splitting;
- Proponent;
- Purpose;
- Regional Assessment in the Ring of Fire Area; and
- Traffic.

The key issues raised during the circulation of the Draft ToR were documented in the Proposed ToR as appropriate and applicable. Additional key issues raised were raised during the review of the Proposed ToR submitted to MECP. Together, the issues raised will be taken into consideration in the future planning and development of the Project. Detailed information describing consultation and engagement activities is available in the Project's Record of Consultation (RoC) (MFFN and WFN, 2022 – Appendix A [Record of Consultation[3]]). The RoC was prepared to support the provincial EA process and was submitted to MECP as Appendix A of the Proposed ToR.

3.3 Plan for Future Consultation and Engagement

The proponent will continue to engage with provincial agencies, federal authorities, stakeholders and the public at an appropriate level. To date, there has been interest by all parties in being engaged on the Project and continually updated; however, limited feedback has been received as the Project is still within the early stages of formal engagement.

The intent of consultation is to provide meaningful opportunities for a wide range of input to be received from all interested parties. The provision of information to the general public, provincial agencies, federal authorities, and other interested persons will provide transparency and accountability throughout the EA/IA process for the Project, allowing for concerns to be documented and addressed to the extent possible. The proponent will keep pertinent government agencies up to date regarding consultation efforts through the RoC and through regularly scheduled meetings. Additionally, relevant Project documents will be made available on the Project's website.

Consultation and engagement activities planned in the future will be tailored to the public, stakeholders and government agencies whose input is required, with many of the activities running concurrently as outlined in **Section 5**. A Consultation and Engagement Plan for the provincial EA is included in the Proposed ToR. It is anticipated that this Consultation and Engagement Plan will evolve as the provincial EA is undertaken and if a federal IA is required.

[3] The Record of Consultation is available at the Northern Road Link Project website – https://northernroadlink.ca/wp-content/uploads/2022/04/NRL-TOR_Appendix-A.pdf

4 Consultation and Engagement with Indigenous Communities and Groups

This section identifies Indigenous communities and groups that may be affected by the Project, and summarizes engagement undertaken with Indigenous communities and groups to date, as of October 2022. This section also summarizes the results of consultation and engagement activities, including consultation and engagement during the development of the ToR for the provincial EA and this Initial Project Description, the key issues raised, and future planned engagement activities moving forward. It is noted that MECP has provided additional time to December 14, 2022, for Indigenous communities to provide review comments on the Proposed ToR. The additional time was provided by MECP at the request of some Indigenous communities for more time to carry out a thorough review of the Proposed ToR.

4.1 Indigenous Communities and Groups Identified for Consultation and Engagement

The MECP, MINES and the Agency have identified Indigenous communities and Indigenous organizations that may be potentially affected by the Project or may have an interest in the Project, as following (MECP, 2020a, 2021a)[4]:

- Animbiigoo-Zaagi'igan Anishinaabek*
- Aroland First Nation*
- Attawapiskat First Nation*
- Constance Lake First Nation*
- Eabametoong First Nation*
- Fort Albany First Nation*
- Ginoogaming First Nation*
- Kasabonika Lake First Nation*
- Kashechewan First Nation*
- Kingfisher Lake First Nation
- Kitchenuhmaykoosib Inninuwug First Nation*
- Long Lake #58 First Nation*
- Marten Falls First Nation*
- Métis Nation of Ontario – Region 2
- Neskantaga First Nation*
- Nibinamik First Nation*
- Red Sky Independent Métis Nation
- Wapekeka First Nation
- Wawakapewin First Nation
- Webequie First Nation*
- Weenusk (Peawanuck) First Nation*
- Wunnumin Lake First Nation*

These Indigenous communities are shown on **Figure 4-1**.

[4] The Agency provided a list of Indigenous communities and organizations whose Aboriginal and/or treaty rights may be affected by the Project or who may have an interest in the Project (17 communities). These communities and organizations are identified with an asterisk.

As well, the following Tribal Councils and Provincial Territorial Organizations (PTO) have been notified of the Project to determine their interest in participating in the assessment process:

Tribal Councils

- Independent First Nations Alliance
- Independent Métis Nation
- Matawa Tribal Council
- Mushkegowuk Council
- Nokiiwin Tribal Council
- Shibogama Council
- Windigo First Nation Council

Provincial Territorial Organizations

- Nishnawbe Aski Nation (also known as Grand Council Treaty 9)
- Anishinabek Nation (also known as the Union of Ontario Indians)
- Métis Nation of Ontario
- Chiefs of Ontario

SIZE 11x17

Weenusk (Peawanuck) First Nation
Winisk River
Winisk River Prov. Park
Winisk 90 First Nation
Severn River
Severn River Prov. Park
Kitchenuhmaykoosib Inninuwug
Wapekeka First Nation
Kasabonika Lake First Nation
Bearskin Lake First Nation
Wawakapewin First Nation
Muskrat Dam Lake First Nation
North Caribou Lake First Nation
North Caribou Lake
Kingfisher Lake First Nation
Wunnumin Lake First Nation
Webequie First Nation
Nibinamik First Nation
Pipestone River Prov. Park
Neskantaga First Nation
Otoskwin-Attawapiskat River Prov. Park
Eabametoong First Nation
Pickle Lake
Mishkeegogamang First Nation
Albany River
Albany River Prov. Park
Marten Falls First Nation
State Falls First Nation
Lake St. Joseph
Wabakimi Prov. Park
Ogoki River Prov. Park
St. Raphael Lake Prov. Park
Ojibway Nation of Saugeen First Nation
Whitesand First Nation
Aroland First Nation
Sioux Lookout
Oboonga-ottertooth Prov. Park
Kopka River Prov. Park
Gull Bay First Nation
Lake Nipigon
Nipigon Moraine Prov. Park
Municipality of Greenstone
Long Lake #58 First Nation
Animbiigoo Zaagi'igan Anishinaabek First Nation
Ginoogaming First Nation
Brightsand River Prov. Park
Gull River Prov. Park
Black Sturgeon River Prov. Park
Rocky Bay First Nation
Sandbar Lake Prov. Park
Seine River First Nation
Lac des Mille Lacs First Nation
Kashabowie Prov. Park
Red Rock First Nation
Lake Helen First Nation
Ruby Lake Prov. Park
Pays Plat First Nation
Quetico Prov. Park
Red Sky Independent Métis Nation
Thunder Bay
Lake Superior
Sleeping Giant Prov. Park
Slate Islands Prov. Park
Pic River First Nation
PUKASKWA NATIONAL PARK
Pic Mobert First Nation
White Lake Prov. Park
Obatanga Prov. Park
Missanabie First Nation
Constance Lake First Nation
Fushimi Lake Prov. Park
Nagagamisis Prov. Park
Missinaibi Prov. Park
Missinaibi River
Mattagami River
Chapleau-nemegosenda River Prov. Park
Flying Post First Nation
Timmins
Taykwa Tagamou
Rene Brunelle Prov. Park
Greenwater Prov. Park
Little Abitibi Prov. Park
English River First Nation
Attawapiskat 91 First Nation
Attawapiskat River
Attawapiskat First Nation
Polar Bear Prov. Park
James Bay
Akimiski Island
Kashechewan First Nation
Fort Albany First Nation

PROJECT LOCATION
Webequie First Nation
Neskantaga First Nation
Eabametoong First Nation
Marten Falls First Nation
Otoskwin-Attawapiskat River Provincial Park

Legend:

- Indigenous
- Communities to be Engaged
- First Nation Reserve
- Project Location
- Cities/Towns
- All-Season Road
- Resource Road
- Winter Road
- Rail
- Federal National Park
- Provincial Park
- Conservation Reserve
- Waterbody

NRL Northern Road Link

NOTES

1. Coordinate System: GCS North American 1983 CSRS.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04

250 125 0 Km
SCALE: 1:4,000,000

Northern Road Link

Indigenous Communities to be Engaged

Figure Number:		REV:
4-1		PA
Client:	**Project Number:**	**Date:**
Marten Falls and Webequie First Nations	679878	2023-01-31

DSC	DRN	CHK	APP
	AD	ND	ND

SIZE 11 X 17

Document Path: \\tor01\PROJECTS\E&W\Projects\679878 - Northern Road Link\40_Execution\45_GIS_Dwgs\MXD\IPD\679878_NRL_PLN_IPD_IndigenousComunityEngagement_0001_0008.aprx

4.2 Summary of Consultation and Engagement Activities to Date and Key Issues Raised

Table 4-1 provides a summary of consultation and engagement activities that have been completed to date with all Indigenous communities identified in **Section 4.1**.

Table 4-1: Consultation and Engagement Activities to Date – Indigenous Communities

Activity	Delivery Method	Date
Website – set-up and updates	Website	Ongoing
Social media pages – set-up and updates	Social Media	Ongoing
Newsletter #1	Website and Email	April 19, 2021
Introduction/Environmental Assessment (EA) process presentation with Marten Falls First Nation (MFFN)/ Webequie First Nation (WFN)	Virtual	April 22, 2021
Notice of Commencement of the Terms of Reference (ToR) for the provincial EA process	Mail and Social Media	May 4, 2021
Notice of Commencement of the ToR for the provincial EA process	Newspaper Ads (Anishinabek News [online], Geraldton Times Star, Northern Ontario Business [online], Sioux Lookout Bulletin, TBNews Watch, Thunder Bay Chronicle Journal, Thunder Bay Source, Timmins Daily Press, Wawatay News [online], and Windspeaker [online])	May 4, 5 , 6 and 8, 2021
Live Stream event featuring MFFN Chief and Council	Virtual	May 4, 2021
Live Stream/Radio Show – Introduction to the ToR	Virtual and Radio	June 2, 2021
Meeting with MFFN re: Attawapiskat River crossings	Virtual	June 15, 2021
Live Stream/Radio Show – Contents of the ToR	Virtual and Radio	June 16, 2021
Virtual community meeting with WFN to introduce project and explain that there are three separate projects (Marten Falls Community Access Road (MFCAR), Northern Road Link (NRL) and Webequie Supply Road (WSR))	Virtual	June 25, 2021
Live Stream/Radio Show – ToR Consultation Plan	Virtual and Radio	June 30, 2021
Meeting with MFFN re: Attawapiskat River crossings	Virtual	August 18, 2021
Notice of Open House #1	Email and social media	August 31, 2021
Newsletter #2	Website and Email	September 1, 2021

Activity	Delivery Method	Date
Notice of Open House #1	Media advertising (Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout Bulletin, Geraldton Times Star, Thunder Bay Source, Anishinabek News, Northern Ontario Business)	September 7, 8 and 9, 2021
Update meeting with MFFN	Virtual	September 10, 2021
Open House #1 – included newsletter, survey, panels for discussion and presentation – for upcoming release of the Draft ToR	In-person (Thunder Bay) and Virtual	September 14 and 15, 2021
Open House #1 Surveys	Via SurveyMonkey application and hardcopy at the Open House	September 2021
Newsletter #3	Website and Email	November 15, 2021
Notice of Draft ToR for Review	Mail and Social Media	November 24, 2021
Notice of Draft ToR for Review	Media advertising (Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout, Geraldton Times Star, Anishinabek News, Northern Ontario Business, Wawatay News, Windspeaker)	November 24, 2021
Comment period on Draft ToR	N/A	November 24, 2021 to January 31, 2022
Live Stream/Radio Show – Draft ToR Review Sessions	Virtual and Radio	December 13, 2021
Live Stream/Radio Show – Draft ToR Review – Where are we in the ToR and what comes next?	Virtual and Radio	January 19, 2022
Newsletter #4	Website and Email	January 25, 2022
Live Stream/Radio Show – Themes of Comments Received	Virtual and Radio	February 2, 2022
Notice of Open House #2	Media advertising (Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout, Geraldton Times Star, Thunder Bay Source, Anishinabek News, Northern Ontario Business, Wawatay News, Windspeaker)	February 9, 2022
Notice of Open House #2	Email and Social media	February 11, 2022
Live Stream/Radio Show – Federal Process	Virtual and Radio	February 16, 2022
Open House #2	Virtual	February 23 and 24, 2022
Open House #2 Surveys	Via Online Surveys in Virtual Reality Open House	February 2022

Activity	Delivery Method	Date
Live Stream/Radio Show – The Initial and Detailed Project Descriptions (DPD)	Virtual and Radio	March 2, 2022
Live Stream/Radio Show – DPD	Virtual and Radio	March 16, 2022
Live Stream/Radio Show – Proposed EA ToR	Virtual and Radio	March 30, 2022
Radio Show – Submission of the Proposed ToR	Radio	April 13, 2022
Live Stream – NRL Announcement with Premier Doug Ford and Minister Rickford	Virtual	April 14, 2022
Notice of Proposed ToR	Mail and Social Media	April 29, 2022
Notice of Proposed ToR	Media advertising (Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout, Geraldton Times Star, Anishinabek News, Northern Ontario Business, Wawatay News, Windspeaker)	April 29, 2022
Live Stream/Radio Show – Geology, Soils and Terrain	Virtual and Radio	April 27, 2022
Comment period on Proposed ToR	N/A	April 29, 2022 – June 28, 2022 Additional time provided to Indigenous communities to December 14, 2022
Live Stream/Radio Show – Waterfowl and Breeding Birds	Virtual and Radio	May 11, 2022
Live Stream/Radio Show – Field Studies: Fish & Fish Habitat	Virtual and Radio	May 25, 2022
Live Stream/Radio Show – Groundwater and Surface Water	Virtual and Radio	June 8, 2022
Newsletter #5	PDAC Conference Handout	June 13, 2022
NRL Showcase at Prospectors and Developers Association of Canada	Conference	June 14-15, 2022
Live Stream/Radio Show – Air, Noise and Vibration Studies	Virtual and Radio	June 22, 2022
Newsletter #6	Website and Email	August 26, 2022
Newsletter #7	Website and Email	October 17, 2022
Live Stream/Radio Show – Proposed EA ToR comments- Climate Change and Water	Virtual and Radio	October 17, 2022
Newsletter #8	Website and Email	October 27, 2022
Live Stream/Radio Show – Proposed EA ToR comments- EA Process and EA Higher-Level Comments	Virtual and Radio	October 31, 2022
Community meeting for MFFN and WFN members in Thunder Bay	In person (Thunder Bay)	November 30, 2022

Appendix E summarizes consultation and engagement by each Indigenous community or group and the results of these activities.

Appendix D, Table D-3 summarizes key issues raised to date by each Indigenous community or group, during the ToR stage of the provincial EA process and the proponent's responses to these issues, including:

- Aboriginal or Treaty Rights and Interests;
- Alternatives Means/Methods;
- Climate Change Assessment;
- Consultation and Engagement;
- Cumulative Effects;
- Guiding Principles for Consultation and Engagement;
- Human Health;
- Indigenous Input;
- Indigenous Knowledge;
- Lake Sturgeon;
- Peatlands;
- Project Splitting;
- Regional Assessment in the Ring of Fire Area;
- Study Areas;
- Wildlife and Wildlife Habitat; and
- Women and Girls' Specific Analysis.

The key issues raised during the review of the Draft ToR were documented in the Proposed ToR as appropriate and applicable. Additional key issues were raised during the review of the Proposed ToR submitted to MECP. Together, the issues raised will be taken into consideration in the future planning and development of the Project, Detailed information describing consultation and engagement activities is available in the Project's RoC, which is included as Appendix A of the Proposed ToR (MFFN and WFN, 2022 – Appendix A [Record of Consultation]). The RoC was prepared to support the provincial EA process and was submitted to MECP as Appendix A of the Proposed ToR.

4.3 Plan for Future Consultation and Engagement

The proponent will continue to engage with Indigenous communities, organizations and groups at an appropriate level. To date, there has been interest by all parties in being engaged on the Project and continually updated; however, limited feedback has been received as the Project is still within the early stages of formal engagement.

The intent of consultation is to provide meaningful opportunities for a wide range of input to be received from all interested parties. The provision of information to Indigenous communities, organizations and groups will provide transparency and accountability throughout the EA/IA process for the Project, allowing for concerns to be documented and addressed to the extent possible. The proponent will keep Indigenous communities, organizations and groups up to date regarding consultation efforts through the RoC and through regularly scheduled meetings. Additionally, relevant Project documents will be made available on the Project's website.

Consultation and engagement activities planned in the future will be tailored to Indigenous communities, organizations and groups whose input is required, with many of the activities running concurrently as outlined in **Section 5**. A Consultation and Engagement Plan for the provincial EA is included in the Proposed ToR. It is anticipated that this Consultation and Engagement Plan will evolve as the provincial EA is undertaken and if a federal IA is required.

5 EA/IA Consultation and Engagement

This section provides a summary of the planned consultation and engagement for the EA and if an IA is required. Further detail is available in the Project's Environmental Assessment Consultation and Engagement Plan (SNC-Lavalin and Dillon, 2022), which is provided as Appendix B of the Proposed ToR (MFFN and WFN, 2022). If an IA is required for the Project, the proponent's requirements for engagement with members of the public and the record of engagement would be outlined in the Tailored Impact Statement Guidelines (TISG) and accompanying Public Participation Plan and Indigenous Engagement and Partnership Plan. If a TISG and accompanying plans were to be issued, the proponent may need to amend the engagement activities outlined in this Initial Project Description.

5.1 Purpose

The purpose of consultation and engagement is to promote effective two-way communication between the proponent and members of potentially affected Indigenous communities, Indigenous organizations, provincial agencies and federal authorities, the public and other stakeholders; to present and receive information and to identify and address issues and concerns related to the Project through mitigation and/or accommodation. Furthermore, in accordance with the applicable Codes of Practice (MOE, 2014a, 2014b, 2014c), consultation is intended to:

- Identify Indigenous communities and other stakeholders who may be affected by or have an interest in the undertaking;
- Share relevant information about the proposed Project;
- Receive guidance on the EA/IA;
- Identify information, concerns and opportunities to be considered in the EA/IA;
- Support the development of commitments by the proponent;
- Encourage the submission of requests for further information and analysis early in the EA/IA; and
- Enable MECP to make a fair and balanced decision on the EA/IA[5] .

Additionally, the MECP provided consultation requirements in a letter dated November 3, 2020 (MECP, 2020a). While outlining that the Project must adhere to the ToR Code of Practice (MOE, 2014a) and the EA Code of Practice (MOE, 2014b), the MECP also indicated the following minimum requirements for the consultation program:

- Notification to the public about the Project at key milestones;
- Provide information about the Project;
- Consider and provide responses to comments; and
- Maintain a RoC for each community/organization.

The RoC must contain all related non-confidential communications including letters/emails (outgoing and incoming), publication of notices, meetings (i.e., agendas, meeting summaries), issues raised and how they have been addressed/considered.

[5] MECP is responsible for decisions regarding the provincial EA process only, not the federal IA process.

5.2 Objectives

Consultation and engagement with Indigenous communities and organizations, stakeholders, provincial agencies and federal authorities, and the public is integral to creating and maintaining relationships and open communication. The Crown has a legal obligation to consult with Indigenous people where it contemplates decisions or actions that may adversely impact asserted or established Aboriginal or Treaty Rights. The proponent's consultation and engagement efforts will provide opportunities for Indigenous peoples as well as stakeholders, provincial agencies, federal authorities, and the public to be meaningfully engaged, as well as share IK/ILRU so that it that may be incorporated into the EA/IA.

The proponent is committed to conducting a comprehensive, and meaningful consultation and engagement process for the Project. The process has been developed, and will be executed in respect of the following:

- General engagement principles;
- MFFN Elders' guiding principles;
- WFN's Three-Tier approach to Indigenous community consultation and engagement; and
- Requirements of applicable legislation, policies and guidelines.

5.3 Guiding Principles

5.3.1 General Engagement Principles

Consultation and engagement activities will embrace the following general engagement principles:

- **Meaningful** – The proponent will link participation and engagement directly to the Project objectives to inform the EA/IA. The engagement process will provide meaningful opportunities for early involvement of Indigenous communities and organizations, provincial agencies and federal authorities, the public and stakeholders to support their continued participation throughout all stages of the EA/IA. This includes engagement that allows for back-and-forth discussion about issues and responding to concerns and questions raised about the Project through certain venues such as written documentation and Open Houses (virtual and in-person), surveys, Live Stream sessions, and radio call-in shows. The proponent may respond to some comments by updating of frequently asked questions on the Project's website and will respond in writing to all comments received in writing where the name and contact information of the commenter is provided. This will be documented in the RoC.
- **Transparent** – Opportunities to participate will be communicated through multiple channels to share information appropriately and effectively. Feedback received will be documented and the proponent will demonstrate how the input from Indigenous communities and organizations, provincial agencies and federal authorities, the public and stakeholders were used and incorporated into the EA/IA and documented in the RoC.
- **Inclusive and Accessible** – The proponent will provide different opportunities for diverse members of Indigenous communities and organizations, the general public and interested stakeholders to learn about and be involved in the Project. This includes providing and reasonably adjusting timeframes where necessary to consider working schedules, community meetings, in-person engagements as well as call-in options for those without a computer or reliable internet connection. Documents and materials will use language that is easy to understand and free of technical jargon and, where feasible, key documents/presentations may be translated into the Indigenous language of participating communities.
- **Flexible** – The proponent will be responsive to issues and concerns that are expressed and will consider this input in the decision-making process related to this Project in a manner that will minimize adverse effects and maximize benefits.

- **Collaborative** – The proponent will work closely with their communities (MFFN and WFN) and other potentially affected Indigenous communities and organizations, provincial agencies and federal authorities, the public and stakeholders to leverage opportunities for collaboration, and share best practices and lessons learned, wherever possible.

5.3.2 Guiding Principles for Engagement

The proponent will adhere to a combination of mutual guiding principles of MFFN and WFN.

Elders from both communities have provided guidance to the proponent so that consultation and engagement for the EA/IA is conducted in a respectful manner that reflects their culture and traditions of MFFN and WFN as Indigenous proponents of the Project.

All EA/IA-related consultation and engagement activities will be inclusive of the following guiding principles:

- Mutual recognition of inherent rights;
- Mutual recognition of ancestral knowledge;
- Mutual recognition of traditional knowledge and practices;
- Mutual recognition of clan families and relationships;
- Mutual recognition of sustainable livelihood; and
- Mutual recognition of traditional protocols.

Early in the process, we will reach out to Indigenous communities to request information and direction on consultation and engagement principles, protocols and practice. When visiting Indigenous communities, the proponent will respect their protocols and principles as appropriate. Additionally, consultation and engagement activities will include some of the key elements of consultation as outlined in the Nishnawbe Aski Nation Handbook on Consultation in Natural Resource Development (Nishnawbe Aski Nation, 2007) so that consultation is:

- A continuous process;
- About exchanging information;
- About building relationships;
- About getting feedback;
- About exchanging additional information, as required;
- About identifying issues;
- About accommodation and reconciliation;
- About fairness; and
- About negotiating with the right attitude.

5.3.3 Marten Falls First Nation Elders' Guiding Principles

To honour the traditional lands in which this Project will be developed and to respect the traditional teachings, the following Guiding Principles (MFFN, 2020) have been endorsed by both communities (MFFN and WFN) and will be used throughout the engagement process. These were originally prepared for the draft Marten Falls Community-Based Land Use Plan (CBLUP) currently in development:

1. "Kezhikanawabajikateg kaye ji tepwaaniwaang kekikinozhiwemakaang."

"Everything on our land and water is living and needs to be respected."

The land and all of its living creatures are viewed by the Anishinabek as integral to the circle of life and integral to the survival and balance and harmony of the environment that Anishinabek is only one part of.

2. “Kawininitojikateg nikan onajikewining ineke.”

“The Anishinabek relationship to the land should be seen as a cultured landscape; also an area that is continuously being used by the Anishinabek as a habitation and as a resource.”

The Anishinabek are of the land; their customs, identity, and cultures are tied intricately to the land and its resources.

3. “Kakina ji wiinda mawa nowaht anishinabek ka onjiwatch.”

“Engage the Anishinabek on all issues that affect our shared and communal lands.”

All Anishinabek should be treated with respect and therefore, are to be engaged on matters that affect their lives directly.

4. “Jih ishi kanawejikatey kakina kekon.”

“Respect the natural and Anishnawbe customs and teachings at all times.”

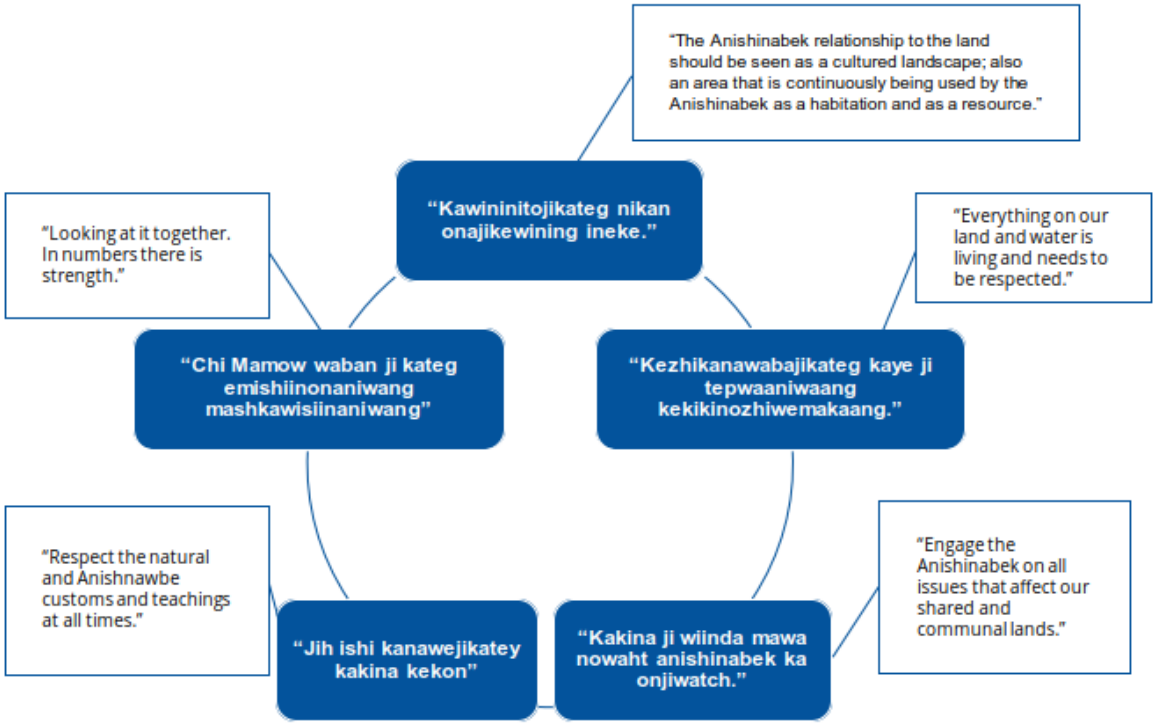
The Creator put Anishinabek on these lands as stewards of the land to take care of the lands and use the lands and its resources indefinitely. The only conditions were to adhere to the natural and traditional teachings of the Elders.

5. “Chi Mamow waban ji kateg emishiinonaniwang mashkawisiinaniwang.”

“Looking at it together. In numbers there is strength.”

With consultation, the more persons that are directly affected, the more need to be involved in the process; therefore, the process will need to find ways to accommodate Anishinabek people (members and other stakeholders) (MFFN, 2020). The MFFN Elders’ Guiding Principles are shown in **Figure 5-1**.

Figure 5-1: MFFN Elder’s Guiding Principles (MFFN, 2020)

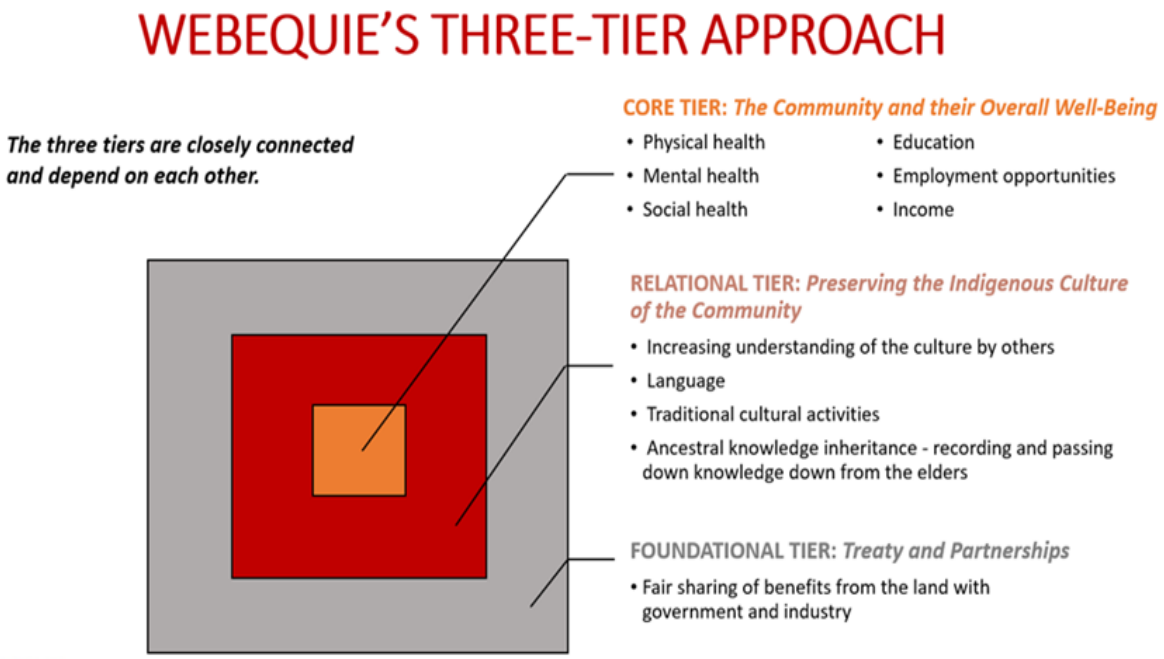


The guiding principles noted above, and other general principles of consultation and engagement will be refined in accordance with protocols and principles of other Indigenous communities and Indigenous organizations throughout the EA/IA.

5.3.4 Webequie First Nation Three-Tier Approach

WFN's Three-Tier approach has been endorsed both communities (MFFN and WFN) and will be used throughout the engagement process. WFN's Three-Tier approach is consistent with WFN and MFFN's traditional cultural values, customs and beliefs, as shown in **Figure 5-2** and described below (WSR, 2020).

Figure 5-2: WFN Three-Tier Approach (WSR, 2020)



This consultation approach has been inherently passed on through generations by WFN's IK Keepers and forms part of the WFN Elders' Guiding Principles that harmonize with regulatory requirements for consultation and engagement.

Core Tier – Webequie First Nation and Marten Falls First Nation

The community approach to project development and consultation is based on Bimachiiowiin (life sustaining or sustainable), Ondatissiwiin (source of life) and Minobiimatissiwiin (prosperity and good life agreements).

Bimachiiowiin is a result of sustainable community, which relies on the Foundational Tier. This is the tier where relationships are made with government regulators. The benefits are brought back to flow to the community.

Ondatissiwiin is the source of life. The source of livelihood depends on the relationship and benefit agreements with First Nation Partners, governments and industry, which is a benefit for the community.

The source is realized through project development or exploring and it either must be found or created. For this Project, access to the source of Bimachiiowiin is a road project and, as such, must be explored and created.

Minobiimatissiwiin is the result of prosperity and good life agreements. It is measurable through baseline studies of existing social and economic conditions today.

Relational Tier – First Nations Neighbours and Government Agencies

In order to sustain its way of life, the community must breathe and the people must be able to practice their way of life with the land, as well as their languages and culture. The Relational Tier next to the core of the community is an adaptive transitional tier supporting the fixed location of the community, and relies on the land animals and wildlife to allow community members to practice the Creator-given rights to hunt and fish without having to move the family to different locations for harvesting purposes.

It is well understood that any project developed within their traditional territory could have effects on others. It is also well understood that the regulatory environment to develop projects, requires approvals and authorizations government agencies.

The Relational Tier of this approach to consultation and project development involves outreach to and involvement of other potentially affected First Nations, many of whom are home to WFN and MFFN family/clan members; and developing relationships with and working closely with provincial agencies and federal authorities. It is recognized that these relationships and connections are important to maintain in a positive way.

Foundational Tier – Social and Economic Benefits from the Land

The approach to project development and consultation is based on the overarching objective to create social and economic benefits for the members of the WFN and MFFN through the use and development of resources on their lands.

Social and economic benefits will result in a number of positive outcomes for the community, including improved standard of living through increased revenues; and self-determination – reduced reliance on provincial and federal government sources of funding, and the ability for the community to make decisions about activities and development within their traditional territory.

The social benefits of increased economic activity and revenues into the community are many, including improved housing and family well-being through reduced crowding that will also lead to improved health conditions. Creating economic activity will also increase skill levels and employment opportunities, all of which contribute to economic prosperity, which will then contribute to the improvement of all social outcomes for the community.

Economic prosperity, social well-being and self-determination are at the foundation of the Three-Tier approach. Development opportunities must, in and of themselves, also be sustainable, providing long-term benefits to the community, and not at any cost. Any development within the traditional territory of the WFN and MFFN must be respectful of and consistent with the values, traditions and culture of the community.

As can be seen, the basic guiding principles held by the two communities, while expressed differently, are very similar and intricately tied together. The Core Tier of the Three-Tier Approach, with its focus on the overall physical, mental and social well-being of the community members, is linked closely with the principle of the importance of balance and harmony of all living things. The Relational Tier is directly linked to the principle of respecting and preserving the natural and Anishnawbe customs and teachings passed down by the Elders. The Foundational Tier is underpinned by the principle that the lands are shared and communal, and, as such, the benefits from the land should also be shared with government and industry.

5.4 Key Communication and Engagement Tools

A variety of activities and materials will be used to provide information and receive input from Indigenous communities, Indigenous organizations, provincial agencies, federal authorities, the public and other stakeholders. **Table 5-1** briefly describes the tools and activities that are to take place at various stages throughout the preparation of the EA/IA and will be used and presented at milestone to facilitate and elicit important feedback at those points. Comments and questions received would be addressed through appropriate channels and noted in the RoC.

Table 5-1: Communication and Engagement Tools

Method of Engagement	Description
Notification Letters	Notification letters will be prepared and sent by registered mail to all of the identified Indigenous communities, Indigenous organizations and anyone in the information circulation list to inform them of the EA/IA milestones, including: EA/IA initiation/introduction; the Draft EAR/IS for feedback and comments.
Direct Mail/Email	A mailing list has been developed and will be maintained throughout the course of the EA/IA. Those on the mailing list will be sent notices of meetings and other key milestones of the EA/IA process.
Notices and Newspaper Advertising	Notices will be issued at various points throughout the EA/IA to inform of EA/IA commencement, process milestones, and submission, as well as notices for community meetings. Notices will be published in local newspapers.
Comment Forms and Surveys	Comment forms and surveys will be made available at community meetings, Open Houses, and on the Project website.
Newsletters and Radio	Newsletters will be prepared during the EA/IA. Newsletters are planned to be distributed monthly and made available on the Project website. Local radio stations will be used where possible to provide Project information via presentations or call-in shows.
Public and Stakeholder Open Houses	Introductory materials will be presented for the Public and Indigenous Open Houses, which would be done in-person and virtually. There will be an opportunity to ask questions and provide feedback via a comment form during and after the Open Houses to support our consultation efforts. Open Houses will be live-streamed. In addition, a recording of the Open House presentation will be posted to the Project website, and additional times are provided for question and answer to be done virtually. The Open House presentation will be recorded and posted on the Project website. Information gathered at the Open House will be used to complete the Draft EAR/IS.
Wawatay Radio and Live Streaming Sessions	Regular Call-in Radio Show – Wawatay Radio and Live Streaming Sessions. Sessions will be topic-specific and will offer an opportunity for Indigenous communities and the public to engage with the Project team and have their questions answered live.
Project Website and Social Media	A Project website is available where the public and stakeholders can review Project-related information at www.northernroadlink.ca. The Project website will serve as a hub for all public documents. Social media will be used to promote radio shows and live streaming sessions, open houses, and to share Project information.

5.5 Issues Resolution

The proponent expects that, during the EA/IA, issues will arise that will need to be resolved. To manage these issues, all comments, questions and concerns will be documented in the RoC and responded to accordingly. The comments and responses will be included in the ToR and EAR/IS, as applicable, including how feedback will be incorporated into the EA/IA. The proponent is committed to ongoing discussion, meetings, and proposed issue resolution approaches (e.g., mediation), which will be documented to record the issue resolution process for each issue raised.

5.6 Record of Consultation

A RoC will be maintained for the Project. The proponent will maintain an electronic communication log and database to keep track of all consultation and engagement activities, such as correspondence, telephone calls, web site communications, text messages, community and stakeholder meetings, and Open House sessions and any other meetings that were held. This log will also record the type of correspondence received, to whom it was addressed and when it was received, and a summary of the incoming and outgoing correspondence. The database will also document by whom and when the comments were addressed, the content of the response, and how the comment/response was incorporated into the EA/IA process.

The consultation summary and RoC will include:

- Description of consultation and engagement activities undertaken;
- Description of engagement with communities and interested stakeholders who were identified, notified and consulted;
- Summary of comments and concerns raised during consultation events and during the EA/IA and the proponent's responses to comments and how concerns were considered and/or incorporated into the EA/IA;
- Description of concerns and responses;
- Summaries from meetings held;
- Copies of written comments received from interested groups and responses provided; and
- All related non-confidential communications, including letters/emails, publication of notices, meetings, and issues raised and how they have been addressed/considered.

5.7 Schedule of Consultation and Engagement Activities

Table 5-2 outlines the Project's regulatory milestones and the proposed consultation and engagement activities proposed for each milestone. Virtual meetings may be needed in replacement of in-person meetings based on challenges related to the current COVID-19 pandemic.

Table 5-2: Consultation Milestones

Milestone	Consultation and Engagement Activity	Outcome
Notice of Commencement of EA/IA (Provincial Task)	› Circulate Notice of Commencement of EA; › Letter to Chiefs and Councils; and › Meet Chiefs and Councils.	› Identify interest to participate; and › Consolidate/update initial Indigenous and Stakeholder Contact List.
Baseline Data Collection, Identification of Alternatives	› Indigenous Open Houses/Community Meetings to introduce the Project and seek input on baseline data collection and identification of alternatives; › Open House for WFN and MFFN Members in Thunder Bay; › Non-Indigenous communities, public and stakeholder Open House (Thunder Bay); › Website; and › Newsletters (to be posted on the website).	› Input to study plans (e.g., scope of baseline studies, effects assessment); › Input to Cumulative Effects Assessment Study Plan; › Input to alternatives (e.g., routing, ancillary infrastructure – aggregate sources); › Input to criteria and indicators; › Input to baseline information; and › Gather IK/ILRU to characterize existing conditions and identify Project area features and resources that are of value to the community.

Milestone	Consultation and Engagement Activity	Outcome
Evaluation of Alternatives, Selection of Preferred Methods, Preliminary Effects Assessment, and Cumulative Effects Assessment	› Indigenous Open Houses/Community Meetings to receive input on the evaluation of alternatives and preliminary effect assessment results; › Website; › Newsletters (to be posted on Website); and › Circulation of EA/IA materials.	› Input to evaluation of alternatives; › Input to effects assessment, including mitigation and monitoring; and › Incorporate IK/ILRU into evaluation of alternatives and effects assessment.
Review of Draft EAR/IS	› Indigenous Open House/Community Meetings to discuss and present the Draft EAR/IS, seek comments on the Draft EAR/IS, and solicit additional information for inclusion in the Final EAR/IS; › Non-Indigenous communities, public and stakeholder Open House (Thunder Bay); › Website; › Newsletters (to be posted on Website); › Circulation of Draft EAR/IS; › Post document at Indigenous community Administration offices and participating municipal offices and libraries (document will be provided via email; hardcopy will be provided upon request); and › Follow-up calls to confirm receipt of document.	› Incorporate IK/ILRU obtained into Final EAR/IS; › Input to evaluation of alternatives; › Input to effects assessment, including residual and cumulative; › Input to mitigation measures; › Respond and address to comments on Draft EAR/IS; and › Update Stakeholder Contact List for notices on Final EAR/IS.
Review of Final EAR/IS	› Circulate Notice of Submission of Final EAR/IS; › Letter to Chiefs and Councils; › Website; › Newsletters (to be posted on Website); › Distribution of Final EAR/IS; › Post document at Indigenous community Administration offices and participating municipal offices and libraries (document will be provided via email; hardcopy will be provided upon request); › Indigenous community Open Houses, upon request or as necessary to resolve issues; and › Follow-up calls to confirm receipt of document.	› Receive comments on EAR/IS; and › Prepare responses to comments on EAR/IS.

Table 5-3 summarizes the anticipated schedule of consultation and engagement activities thorough the development of the Project.

Table 5-3: Proposed EA/IA Consultation and Engagement Schedule

Activity	Estimated Dates
Notice of Commencement of Terms of Reference (ToR) (Provincial EA Process)	May 4, 2021[(a)]
Public Open House #1 and Indigenous Open House #1	September 14 and 15, 2021[(a)]
Circulation and Notice of Draft ToR	November 24, 2021[(a)]
Responses to Stakeholders Comments on Draft ToR	January to April 2022[(a)]
Public Open House #2 and Indigenous Open House #2	February 23 and 24, 2022[(a)]
Submission of Proposed ToR to MECP (Provincial EA Process)	April 29, 2022[(a)]
Submission of Initial Project Description (Federal IA Process)	January 2023
Submission of Detailed Project Description with Response to the Summary of Issues (Federal IA Process)	April 2023
Minister's Decision on Proposed ToR (Provincial EA Process)	Winter 2023
Notice of Commencement of EA (Provincial EA Process)	Winter 2023
Public Open House #3 and Indigenous Open House #3[(b)]	TBD
The Agency issues final Tailored Impact Statement Guidelines (TISG) and planning documents (Cooperation Plan, Indigenous Engagement and Partnership Plan, Permitting Plan, and Public Participation Plan), along with the Notice of Commencement of an Impact Assessment (Federal IA Process)	July 2023
Technical EA/IA studies	2022 to 2026
Alternatives Evaluation	TBD
Public Open House #4 and Indigenous Open House #4[(b)]	TBD
Submission and Notice of Draft EAR/IS	TBD
Public Open House #5 and Indigenous Open House #5[(b)]	TBD
Submission of Final EAR/IS	TBD
Minister issues Decision on EA (Provincial EA Process)	TBD
The decision-maker (Minister or Governor in Council) issues a Decision Statement with the reasons for the determination and any conditions (Federal IA Process)	TBD

Notes:

(a) Date the activity was completed.

(b) Open Houses are anticipated to be located in Thunder Bay and Geraldton once these can occur in-person. Dates are tentative and subject to change.

The EAR/IS will summarize the Project-related consultation and engagement activities completed and/or planned by the proponent with the public, Indigenous communities and groups, provincial agencies and federal authorities, and other stakeholders. The EAR/IS will include details of consultation including:

- Principles and purpose of consultation and engagement;
- Identification of Indigenous communities/organizations, public stakeholders, local government, provincial agencies and federal authorities that were engaged;
- Consultation methods and schedule;
- Issues resolution; and
- Detailed RoC and engagement how it was used to inform the EA/IA.

6 Relevant Studies

Over the past two decades, a variety of road and/or transportation studies have been completed examining alternative transportation options and alternative road corridors around the McFaulds Lake area for interconnecting future mine developments and remote Indigenous communities to the highway network. This section provides a summary, in chronological order, of the road and/or transportation studies that are relevant to the Project, including ongoing studies.

Winter Road Re-Alignment Study (2008)

On behalf of five First Nations (Marten Falls, Eabametoong, Neskantaga, Nibinamik and Webequie), the Matawa First Nations Tribal Council conducted studies to examine realigning selected sections of winter roads, and assessment of improvement needs for the entire winter road systems for all five First Nations in the study area (Neegan Burnside Ltd., 2008, 2009). A number of the winter roads for consideration in the study were in the vicinity of the proposed Project. The study included extensive consultation with the Indigenous groups, provincial agencies, federal authorities, and other stakeholders (e.g., forestry companies and outfitters) and identified a number of alternative solutions (e.g., improvement to road design and construction standards) to address deficiencies in the winter road system.

Cliffs Ferroalloys Black Thor Mine Integrated Transportation System (2009 – 2013)

Between 2009 and 2013, Cliffs Natural Resources (“Cliffs”) was investigating the development of a chromite deposit (i.e., Black Thor Chromite Mine) in the McFaulds Lake area of Ring of Fire. In 2011, Cliffs announced its intention to move forward with permitting and development of the open pit/underground mine as well as an on-site ore processing facility, an off-site ferrochrome production facility and an Integrated Transportation System. A detailed feasibility level analysis was completed on the Black Thor project by Cliffs Natural Resources in May 2013 (Noront, 2022). Ore was to be transported by truck and rail to the proposed ferrochrome processing facility. Pertinent to the Project was an all-season access road which was a key component of the Integrated Transportation System. The road would follow a north-south transportation corridor from Painter Lake Road to the Ring of Fire for the purpose of moving people, supplies and resources between the proposed mine and the highway network. According to the documentation of alternatives development prepared for MFCAR, the intention was that “Indigenous communities and other natural resource companies would be permitted users of the all-season access road” (AECOM, 2020a). Cliffs also investigated the availability of aggregate along the corridor for road construction. The identification of the north-south corridor by Cliffs “considered a range of alternative methods for an all-season access road. Input received from consultation for the project was also used to identify the location of the corridor and alignments” (AECOM, 2020a). Cliffs suspended capital spending on the project in 2014 and terminated its federal EA in January 2015 (Northern Ontario Business, 2015). Noront Resources (now Ring of Fire Metals) acquired the Cliffs Natural Northern Ontario Business Resources chromite properties in 2015 (AECOM, 2020a).

Around the same time, KWG Resources, also active in the McFaulds Lake area, studied transportation options into the Ring of Fire area (GreenForest Management Inc., 2013) and identified its preference for a rail/road link that followed a similar corridor to the Cliffs proposed road corridor.

Eagle's Nest Project, A Federal/Provincial Environmental Impact Statement/Environmental Assessment Report (2013)

In 2013, Noront Resources issued a draft federal/provincial EIS/EAR Report for the proposed Eagle's Nest Mine in the McFaulds Lake area (Knight Piésold Consulting, 2013). That report included an examination of alternative transportation corridors (i.e., east-west and north-south) and road types (e.g., winter, all-season and combined winter/all-season) that would connect the mine to the highway network. On August 28, 2019, the *IAA* came into force. As a result, the comprehensive study for the Eagle's Nest Project, which was being conducted under the former *Canadian Environmental Assessment Act* was terminated per the transitional provisions of the *IAA*.

In 2022, Noront Resources was acquired by Wyloo Metals and renamed Ring of Fire Metals. At present, the provincial EA process for the proposed Eagle's Nest Mine is on hold until there is more certainty about a potential all-season road to be developed by others. Details on the current status of Eagle's Nest Mine Project can be found on Ring of Fire Metals' website (https://www.rofmetals.com/projects/eagles-nest/). In identifying transportation corridor alternatives for the Eagle's Nest Mine access road, it was Noront Resources' intention in 2013 to maximize the use of existing winter road corridors and thereby minimize additional clearing and environmental effects. From this assessment, the preferred corridor was identified as an east-west connection via WFN to the Northern Ontario Resource Trail North Road/Pickle Lake Road and Highway 599 near Pickle Lake. The Eagle's Nest Mine access road provided potential all-season access to the highway network for WFN and other Indigenous communities, including the Nibinamik First Nation, Neskantaga First Nation and Eabametoong First Nation.

All-Season Community Road Study (2016)

WFN, in partnership with three other Indigenous communities (Neskantaga First Nation, Nibinamik First Nation and Eabametoong First Nation), completed the All-Season Community Road Study (ASCRS) in June 2016 (Webequie First Nation, Nibinamik First Nation, Neskantaga First Nation and Eabametoong First Nation, 2016). The purpose of this study was three-fold:

- To engage and inform communities to aid in decision-making with respect to continued further planning of an all-season community road;
- To help to identify potential corridors for an all-season road should that be the wish of the communities; and
- To assess the business case for an all-season road.

The goal was to get a clear indication from the communities as to where to proceed with regard to development of an all-season community road. The study examined many alternatives, including those previously preferred by Noront Resources, Cliffs and KWG Resources.

From the community engagement and assessment completed, a preferred corridor was identified with a general east-west orientation that connected the four communities to the highway network. The preferred corridor/road from the 2016 ASCRS did not connect to the McFaulds Lake area due to unresolved issues and concerns expressed by some participating Indigenous communities about mining development in the Ring of Fire area.

All-Season Community Road Study – Phase 2 (2017)

In 2017, Nibinamik First Nation and WFN continued the ASCRS on their own to refine the preferred corridor analysis from the previous phase of the study (Cision, 2017). The ASCRS – Phase 2 involved many discussions with Nibinamik First Nation and WFN land users, elders and youth to refine the corridor centreline and to determine support for an east-west connection to the highway network at the Northern Ontario Resource Trail North Road/Pickle Lake Road. The Phase 2 study (Nibinamik First Nation and Webequie First Nation, 2017) also included more extensive data collection, including field studies and gathering of more IK information. The Phase 2 study identified a refined east-west all-season road corridor, which has essentially the same purpose of connecting WFN and Nibinamik First Nation to the highway network at Pickle Lake.

From the Phase 2 study, it was determined there was reasonably strong support for an all-season community road to the highway network, but not clear and full community support amongst the potentially connected and/or affected Indigenous communities for interconnection of the all-season road to mining activity in the McFaulds Lake area.

Marten Falls First Nation – Community Access Road Phase 2 Studies (2018 to 2021)

MFFN conducted several desktop and field investigations for a future EA of the MFCAR Project to support regulatory review of future applications and inform alternative route planning. Studies included: a geotechnical investigation and aggregate sourcing; baseline studies for biology, hydrogeology, and surface water; and a strengths, weaknesses, opportunities and threats (SWOT) analysis (AECOM, 2021; KBM, 2019a and 2019b; KBM and EDI, 2019; KGS, 2020a and 2020b; Zoetica, 2019). These studies have informed the proposed Project.

Marten Falls Community Access Road EA/IA

The MFCAR project is currently undergoing an EA under the Ontario (EA Act) and an Impact Assessment (IA) under the Federal IAA. MFFN is a remote First Nation community in the Far North of Ontario, located at the junction of the Albany and Ogoki Rivers, approximately 170 km northeast of Nakina, Ontario. The proposed Project will be a multi-purpose all-season community access road approximately 190 km to 230 km in length that will connect the MFFN community to the Ontario highway network. Two alternatives are being considered in determining the location of the all-season road. The road is intended to provide increased travel safety, reduced price of food, fuel and supplies, improved community social, health, education and wellness services, in addition to providing the MFFN community with future economic development opportunities.

Webequie Supply Road EA/IA

The WSR project is currently undergoing an EA under the Ontario (EA Act) and an IA under the Federal IAA. WFN is a remote First Nation community in the Far North of Ontario on the northern peninsula of Eastwood Island on Winisk Lake, 540 km (336 mi) north of Thunder Bay. The WSR is a proposed 107-kilometre all-season road connecting the Webequie Airport and the McFaulds Lake area in Northern Ontario. The corridor would be approximately 35 m in width in order to accommodate a two-lane gravel surface industrial supply road and could enable future infrastructure development such as transmission lines and broadband. As proposed, the WSR project would connect WFN to existing mineral exploration activities and potential future mineral development in the Ring of Fire area. The project could also become part of a future all-season road network connecting WFN and the Ring of Fire area to the provincial highway system in Nakina and/or Pickle Lake.

2021 and 2022 Baseline Surveys for the Northern Road Link Project

Field surveys to collect baseline data for the various biophysical Valued Components for the Project were conducted in 2021 and 2022. The purpose of the field surveys is to gather information to characterize existing conditions, and where applicable verify data as reported in secondary sources. Field surveys were designed to meet the commitments made in the provincial Terms of Reference.

To access survey sites in the study areas for the Project, a combination of helicopters and on-foot access were used. The Project team operated in pairs and carried geo-locator/messenger units, GPS units, satellite phones, and iPhones, along with first aid kits and mammal deterrents.

The 2021 field surveys included:

- Waterfowl surveys (May 11-13, May 25-28, October 15-18);
- Acoustic Recording Unit (ARU) deployment for birds (June through December 2021) and bats (June to early August 2021);
- Fish habitat assessment and fish community sampling (May 31-June 10 and August 9-19);
- Breeding bird surveys (June 10-23 and June 23-July 2);
- Vegetation surveys (June 10-23, July 5-18 and September 7-16); and
- Terrain and aggregate survey (August 22-28).

The 2022 field surveys included:

- Wolverine aerial tracking survey (March 1-8);
- Geotechnical drilling program (April 7-28);
- Waterfowl survey (May 16-20; September 10-15);
- Acoustic Recording Unit (ARU) deployment for birds (March through December 2022) and bats (June to early August 2022);
- Breeding bird surveys (June 6 - 16 and June 27 - July 6);
- Vegetation surveys (June 6-19. July 17–28, and August 26-September 9);
- Fish habitat assessment and fish community sampling (July 7-17 and August 15-24);
- Terrain and potential survey (October 15-19); and
- Bathymetric survey (October 22-27).

Data from these surveys are being compiled and the results will be presented in the EAR/IS.

7 Strategic Assessments

7.1 Regional Assessment in the Ring of Fire Area

On February 10, 2020, the federal Minister of Environment and Climate Change decided to undertake a Regional Assessment on an area centred around the Ring of Fire mineral deposits in northern Ontario. The Agency and MINES have been in discussions on a potential agreement that describes how the Regional Assessment in the Ring of Fire Area would be conducted.

The draft Agreement for the Regional Assessment in the Ring of Fire Area was released December 3, 2021 for a 60-day engagement and comment period. The goal of the Regional Assessment is "To provide information, knowledge and analysis regarding mine development activities and other existing and future physical activities in the Ring of Fire and their potential effects, in order to enhance the effectiveness and efficiency of future impact assessments for these activities in a way that helps protect the environment and health, cultural, social and economic conditions while also creating opportunities for sustainable economic development" (the Agency, 2021a).

The draft agreement indicates in Section 2.1 that "...the Regional Assessment will focus on future mine development activities and their potential effects, as these types of activities are considered the most likely future physical activities to be proposed and carried out in this region in the foreseeable future… In doing so, the Regional Assessment will also consider the relationship of, and potential interactions between, the potential effects of future mine development activities with those of other existing and future activities, including the potential for resulting cumulative effects…" (the Agency, 2021a).

The draft agreement indicates in Section 2.5 that "It is acknowledged that there are ongoing impact and EAs for proposed road developments in Northern Ontario that are not linked to specific mine development activities, which will continue according to their separate legislated processes and timelines". Therefore, the scope, conduct and outcomes of the Regional Assessment will not duplicate those of these ongoing assessments, including their Project-specific assessments of effects, analyses of the purpose of and need for these projects, or other factors and components.

The Draft Agreement to Conduct the Regional Assessment can be found on the Canadian Impact Assessment Registry (https://iaac-aeic.gc.ca/050/evaluations).

7.2 Strategic Assessment of Climate Change

Under the IAA, the extent to which the effects of a designated project hinder or contribute to the Government of Canada's ability to meet its climate change commitments such as the Paris Agreement, Canada's 2030 target and the goal of Canada achieving net-zero emissions by 2050, needs to be considered in the IA process of the designated project.

In 2020, ECCC published the final version of the Strategic Assessment of Climate Change (ECCC, 2020a). The Strategic Assessment of Climate Change applies to designated projects under the IAA. As discussed in **Section 9**, the Project is a designated project in accordance with the *Physical Activities Regulations* SOR/2019-285 under the IAA. Therefore, the proponent will conduct a Strategic Assessment of Climate Change as part of the EA/IA for the Project. The Strategic Assessment of Climate Change for the Project will include:

- A quantification of net GHG emissions;
- An assessment of upstream GHG emissions (if applicable); and
- A discussion on the development of emissions estimates and uncertainty assessment.

The Strategic Assessment of Climate Change for the Project will utilize the following guidance as applicable:

- Strategic Assessment of Climate Change (ECCC, 2020a);
- Draft Technical Guide related to the Strategic Assessment of Climate Change: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment (ECCC, 2021); and
- Draft Technical Guide related to the Strategic Assessment of Climate Change: Assessing Climate Change Resilience (ECCC, 2022).

7.2.1 Climate Change in the Planning Phase

7.2.1.1 Initial and Detailed Project Description

As described in the Strategic Assessment of Climate Change (ECCC, 2020a), during the Planning Phase of a project undergoing an IA process under the IAA, the proponent is required to provide the following information in the Initial and Detailed Project Description:

- **GHG emissions estimates – including:**
  - Estimate of the maximum annual net GHG emissions for each phase of the project, including a breakdown of each term of Equation 1; and
  - The methodology, data, emission factors and assumptions used.
- **Carbon sinks – including:**
  - A description of the activities that would result in an impact on carbon sinks; and
  - Land areas expected to be impacted by the project, by ecosystem type (forests, cropland, grassland, wetlands, built-up land) over the course of the project lifetime, including any areas of restored or reclaimed ecosystems.
- **Alternative means of carrying out the project –** When evaluating alternative means of carrying out the project, project proponents should discuss the potential impacts of the alternatives on GHG emissions and how GHG emissions were considered as a criterion in the alternatives selection.

Section 26 discusses the GHG emissions estimate for the Project. It is anticipated that some Project activities during the construction and operations phase of the Project may affect carbon sinks, including:

- Construction phase activities:
  - Vegetation clearing and grubbing of road ROW and supportive infrastructure (access road, camps, laydown areas aggregate extraction areas);
  - Earth excavation and grading activities, including drainage ditches;
  - Placement, grading and compaction of aggregate material for roadbed;
  - Post-construction clean-up and site restoration; and
  - Development of aggregate extraction areas (e.g., pits and quarries) with crushing/processing facilities that are subject to obtaining an Aggregate Permit.
- Operations phase activities:
  - GHG emissions as result of the operation of the Project.

It is too early in the development of the Project to identify the type, magnitude, and locations of carbon sinks that may be affected by the Project. However, major carbon sinks that may be affected by the project include vegetation communities such as forests, wetlands, and peatlands. This information will be included in the EAR/IS. The potential effects on carbon sinks, will be assessed in the EA/IA through the assessment of Project effects on:

- Plants and vegetation communities (including forests, wetlands, and peatlands);
- Air quality; and
- Greenhouse gases.

Preliminary criteria and factors for the assessment of alternative means of carrying out the Project are included in Table 2-6 of the Project's Proposed Terms of Reference (MFFN and WFN, 2022). The EA/IA process includes the flexibility to refine/modify the evaluation criteria as additional information values becomes available during development of the EA/IA. As such, the potential impacts of the alternatives on GHG emissions will be considered in the alternatives assessment during the EA/IA.

7.2.1.2 Tailored Impact Statement Guidelines

The scope of information related to GHG emissions and climate change in the EAR/IS will be tailored to the Project in the TISG published by the Agency at the end of the Planning Phase (ECCC, 2020a). It is anticipated that the TISG for the Project will require the EAR/IS to include information with respect to:

- GHG emissions;
- Impact of the project on carbon sinks;
- Impact of the project on federal emissions reduction efforts and on global GHG emissions;
- GHG mitigation measures; and
- Climate change resilience assessment of anticipated climate change impacts to the project elements (road corridor and supporting infrastructure).

Proponents of projects with upstream GHG emissions likely greater than or equal to the thresholds outlined in Table 1 of the Strategic Assessment of Climate Change (ECCC, 2020a), will be required in the TISG to provide an upstream GHG assessment and related uncertainty assessment. Based on the preliminary GHG estimate provided in **Section 26**, it is anticipated that the EAR/IS will not need to include an upstream GHG assessment.

7.2.2 Climate Change in the Impact Statement Phase

Following the publication of the TISG for the project, the proponent will prepare an EAR/IS that adheres to the TISG (see **Section 7.2.1.2**).

7.2.3 Climate Change in the Impact Assessment Phase

The Agency, with the support of expert federal authorities, will review, comment on and complement, as needed, the GHG and climate change-related information provided by the proponent in the EAR/IS (ECCC, 2020a). The Agency's review and analysis of the EAR/IS will be made available to the public and decision makers (ECCC, 2020a).

7.2.4 Climate Change in Decision-Making and Conditions

Under the IAA, the Minister of Environment and Climate Change, or Governor in Council[6], must decide whether the project is in the public interest (ECCC, 2020a). If the Project is in the public interest and allowed to proceed, the Minister's decision statement will contain enforceable conditions, including GHG emissions-related conditions, as well as the rationale for the decision (ECCC, 2020a).

These conditions may also include a reporting program in which the proponent would demonstrate progress towards implementing these mitigation measures (ECCC, 2020a).

7.2.5 Climate Change in the Post-Decision Phase

If a decision is made that the Project can proceed, the proponent must comply with any conditions in the Minister's decision statement (ECCC, 2020a).

[6] For impact assessments conducted by the IAAC, the Minister is responsible for making the public interest determination or may refer the decision to the Governor in Council. For impact assessments conducted by a review panel, or an integrated review panel with a lifecycle regulator, the Governor in Council is responsible for making the public interest determination (ECCC, 2020a).

Part B: Project Information

Part B provides further Project information including need and purpose, activities, capacity, schedule and alternatives.

8 Project Purpose and Need

This section provides a statement of purpose of and need for the Project, including any potential benefits.

8.1 Purpose of the Project

The purpose of the Project is the design, construction, and operation and maintenance of a proposed all-season road between the proposed MFCAR and the proposed WSR. The Project will connect the mineral deposits in the McFaulds Lake area in the Ring of Fire to the highway network via the MFCAR, by constructing a new all-season multi-use gravel road with an approximate length of 117 km to 164 km (depending on the chosen corridor). The Project will also provide an opportunity to connect WFN to the highway network. The Project would enable a broader range of economic activity than currently exists by facilitating the transport of goods, services and resources.

The objectives of the Project are to:

- Stimulate sustainable regional economic activity by facilitating all-season road movement of materials, supplies, and people to and from the Ring of Fire area;
- Provide employment and other economic opportunities to MFFN, WFN and local Indigenous community members, while residing in or near their communities, preserving their language and culture; and
- Enable experience and training opportunities for youth to encourage pursuit of additional skills through post-secondary education.

8.2 Need for the Project

The Ring of Fire in the Ontario Far North is considered one of the most promising mineral development opportunities in the province in over a century, with potential for multi-generational chromite production and significant production of nickel, copper and platinum (MINES, 2022). Currently, mine development in the Ring of Fire area is unlikely without year-round access. MFFN and WFN are committed to the sustainable development of their traditional territories. The Project will be a multi-use road between the proposed MFCAR and the proposed WSR. By providing an opportunity to connect the MFCAR to the WSR, the Project will complete the necessary transportation infrastructure link between WFN, the Ring of Fire and the highway network to facilitate economic development in the region. The Project is an important step in linking the communities, the region and the province in general with the economic opportunities surrounding the Ring of Fire.

MFFN and WFN are remote Indigenous communities in northwestern Ontario and are not currently accessible by all-season roads. Each of these communities has initiated their own separate all-season road development projects as shown in **Figure 8-1**. MFFN is undertaking the development of the MFCAR to connect its community to the highway network to the south and to improve the community's well-being by facilitating the transport of goods, services, and resources. WFN is undertaking the development of the WSR between its community and the McFaulds Lake area of the Ring of Fire to facilitate the movement of materials, supplies and people from the Webequie Airport to the proposed mine development and mineral exploration activities. Each proponent is undertaking a federal-provincial coordinated EA/IA for these road projects. The ToRs for the MFCAR project (AECOM, 2020a) and the WSR project (SNC-Lavalin, 2020) have both been approved by the Province of Ontario.

MFFN is an Anishinaabe community located on the north bank of the Albany River, approximately 175 km southeast of WFN, 160 km northeast of the Municipality of Greenstone (i.e., approximately 70 km north of Highway 11) and 430 km northeast of the city of Thunder Bay. WFN is an Ojibway community, located approximately 540 km north of Thunder Bay and 175 km northwest of MFFN. These communities are only accessible by winter road or air transportation. The operational season for winter roads has become shorter and less reliable due to climate change and no longer meets the needs of the communities. Transportation by air is expensive, impacted by weather and has limited availability, so severely limits employment, business, economic and social development opportunities for community residents.

In *Building Better Lives: Ontario's Long-term Infrastructure Plan 2017* (MOI, 2017), the province acknowledges that the communities and urban centres in Northern Ontario need a multimodal transportation system and that the north is especially vulnerable to the effects of climate change, particularly communities reliant on winter roads.

The *Growth Plan for Northern Ontario, 2011* (MOI and MNDMF, 2011) includes a commitment by the province to work with remote communities and other orders of government towards improved access for community residents.

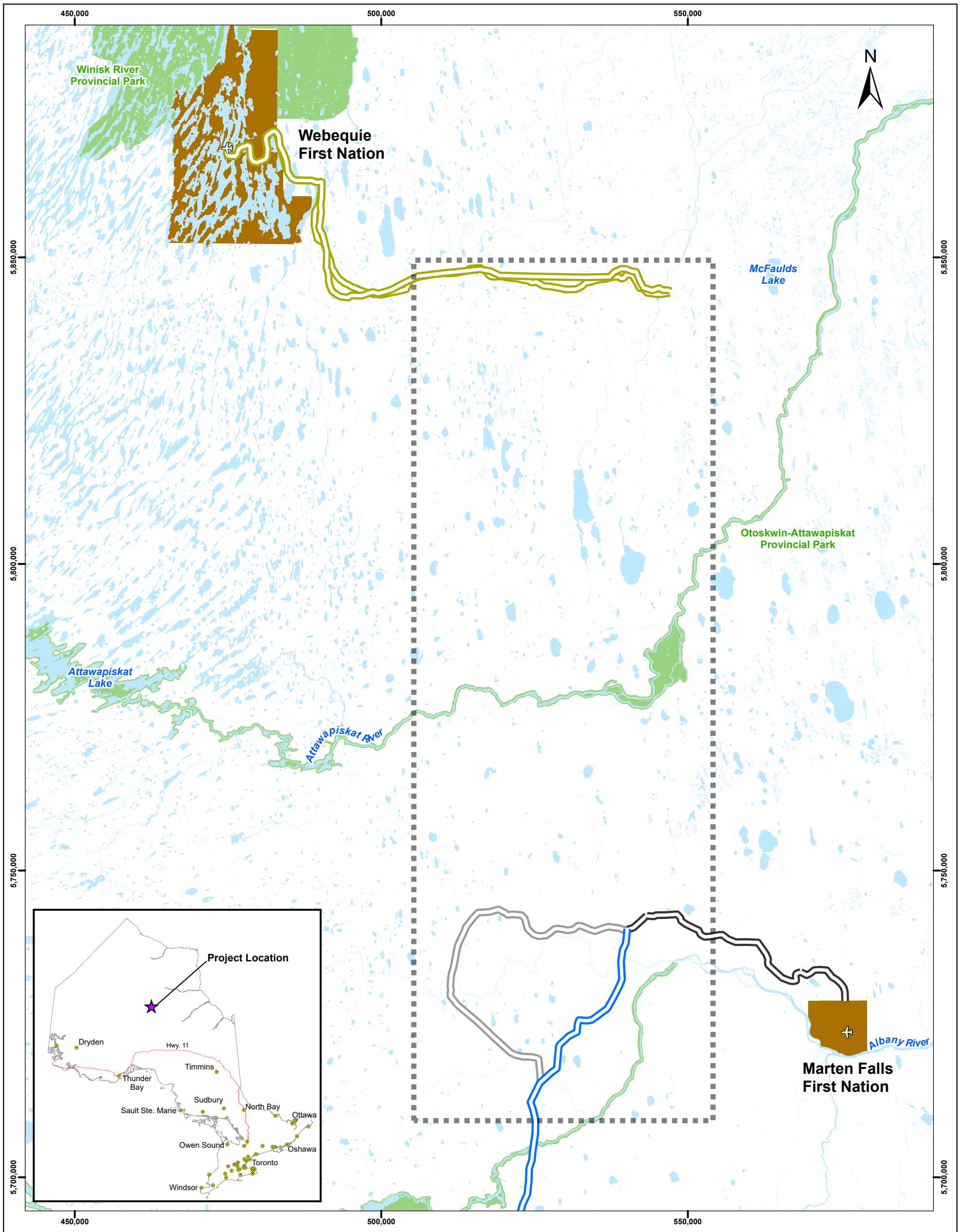
In *Connecting the North: A Draft Transportation Plan for Northern Ontario* (MTO, 2021), the province recognizes that there is a growing demand for the expansion of all-season roads in the Far North, driven by a variety of socio-economic factors, climate change vulnerability and, in the case of the Ring of Fire region, responsible resource development. The plan further states that building a road to the Ring of Fire is a critical step to unlocking economic benefits in the region (MTO, 2021) and that Ontario will continue to support MFFN and WFN as they advance their EAs on their individual road projects[7] for all-season roads to connect their communities and to connect their communities to the proposed Ring of Fire developments (MTO, 2021).

Furthermore, improved road infrastructure in the north, including all-season roads, can reduce the cost of delivering consumer goods, fuel, and construction materials (MINES, 2022). Lastly, the construction, operation and maintenance of all-season road infrastructure will provide the proponent with opportunities to develop business, technical and project management skills that would be transferable to other projects in the region.

In summary, the Project will create several important linkages, including:

- Completing the all-season roadway link between the Ring of Fire and the highway network to the south;
- Connecting the community of MFFN to the Ring of Fire and the associated economic opportunities by an all-season roadway;
- Providing an opportunity to connect the community of WFN to the highway network to the south and the associated socio-economic opportunities by an all-season roadway; and
- Providing an opportunity to interconnect the communities of MFFN and WFN by an all-season road.

[7] Marten Falls First Nation (MFFN) is the proponent of the Marten Falls Community Access Road (MFCAR) project and Webequie (WFN) is the proponent of the Webequie Supply Road (WSR) project.



Legend:

- Project Location
- Proposed Webequie Supply Road (WSR) Alternatives

Proposed Marten Falls Community Access Road (MFCAR) Alternatives

- MFCAR East/West Option Overlap
- MFCAR West Option
- MFCAR East Option
- First Nation Reserve
- Airports
- Provincial Park
- Waterbody
- Highway 11
- Cities

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SCALE: 1:600,000

Northern Road Link

Project Location

Figure Number: 8-1 **REV:** PA

Client: Marten Falls and Webequie First Nations **Project Number:** 679878 **Date:** 2023-01-31

DSC	DRN	CHK	APP
	AD	ND	ND

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04

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9 Physical Activities Regulations

The Project is a designated project in accordance with the *Physical Activities Regulations* SOR/2019-285 under the IAA. The Project is a multi-use all-season road, and depending on the preferred corridor that is selected for the Project, its length is expected to range between 117 km and 164 km. According to Section 51 of the regulations, a designated project includes:

› The construction, operation, decommissioning and abandonment of a new all-season public highway that requires a total of 75 km or more of new right-of-way.

The Project is not part of a larger project that is not listed under the Project List.

10 Project Activities, Infrastructure, Permanent or Temporary Structures and Physical Works

This section provides a general description of the Project activities, infrastructure, permanent or temporary structures and physical works.

This description is based on conceptual design and is subject to change. The EAR/IS will include a more detailed description of the proposed Project based on the preliminary engineering design for the preferred alternative.

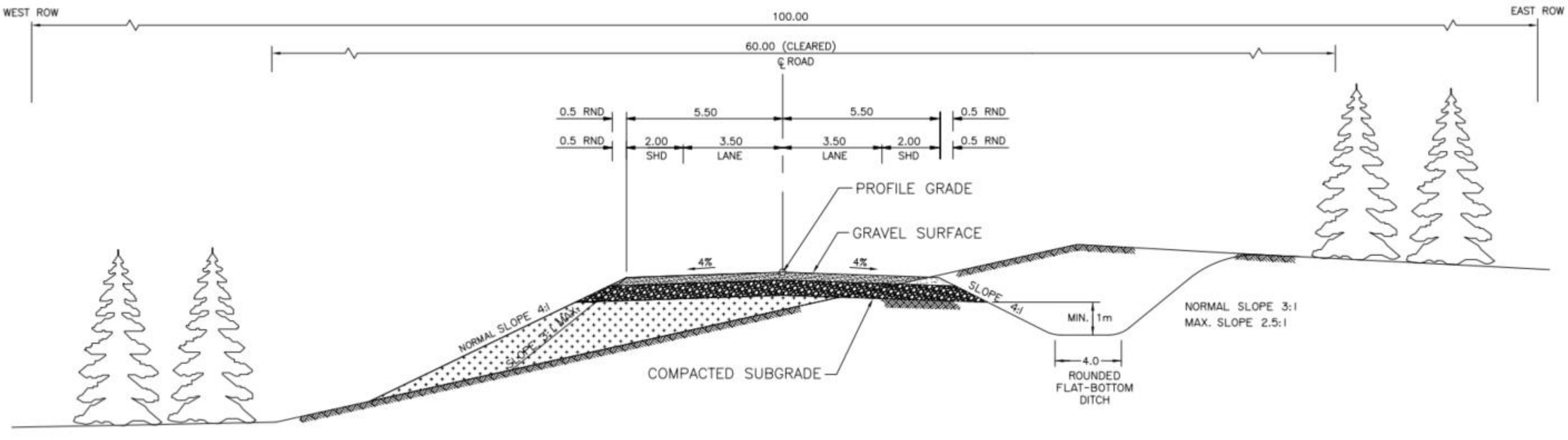
The Project is a multi-use all-season road between the proposed MFCAR and the proposed WSR. The Project is generally bookended by the proposed WSR to the north and the proposed MFCAR to the south as show in **Figure 8-1**. The proposed WSR has a defined east terminus in the McFaulds Lake in the Ring of Fire area to which the Project's north terminus will connect. The south terminus of the Project will connect to the proposed MFCAR.

The road will be gravel surfaced, including shoulders, with material sourced from aggregate sites (pits and quarries) that have suitable sand deposits (e.g., glaciofluvial deposits, rock outcrops and other locations near the roadway). The design of the underlying subgrade material and its depth below the granular surface of the road will have consideration for the typical vehicle types (e.g., light pick-up trucks, heavy industrial/commercial transport trucks and trailers) and volumes that are envisioned to use the road, including their weight/load. Traffic operations may also include mineral ore or mine product hauling. The specific traffic mix (%) of heavy vehicles (e.g., trucks) versus light vehicles will be further examined in the EAR/IS.

The gravel surface of the road will have a cross-fall of 4% for the purposes of drainage. All roadside ditches will be sized for the 10-year Minor System Design Flow and a minimum 100-year Major System Design Flow in accordance with MTO Drainage Standards (MTO, 2008). Culverts at waterbody crossings will be sized to accommodate a minimum 25-year return period design flow for structures with a total span less than or equal to 6.0 metres (m), and a minimum 50-year return period design flow for structures with a total span greater than 6.0 m (MTO Drainage Standards WC-1, WC-7). A minimum culvert diameter or rise of 900 millimetres (mm) will be provided for circular, elliptical or arch culverts. A minimum 900 mm rise will be provided for box culverts (MTO Drainage Standards WC-8). Structural design for bridges and culverts at waterbody crossings will be carried out upon selection of a preferred road alignment and will take into consideration remote access constraints, material availabilities and the Canadian Highway Bridge Design Code (CSA, 2019) as well as environmental considerations. A typical cross-section for the Project is provided in **Figure 10-1**.

Road intersections will be designed in accordance with the Transportation Association of Canada (TAC) Geometric Design for Canadian Roads standards and the MTO/TAC supplemental standards used for municipal roads and provincial highways. Road intersections, as well as other design elements, such as signage, illumination, and commercial/recreational entrances, will be considered during detailed design of the Project.

Roadside safety is of paramount importance, so the Project will be designed in accordance with the MTO Roadside Design Manual (MTO, 2020b).



NORTHERN ROAD LINK GENERAL CROSS SECTION

N.T.S.

Northern Road Link

Typical Cross-Section for the Project

Figure Number:		REV:
10-1		PA

Client:	Project Number:	Date:
Marten Falls and Webequie First Nations	679878	2023-01-31

DSC	DRN	CHK	APP
	AD	ND	ND

10.1 Project Infrastructure and Temporary and Permanent Structures

The Project is expected to include the following infrastructure and temporary and permanent structures.

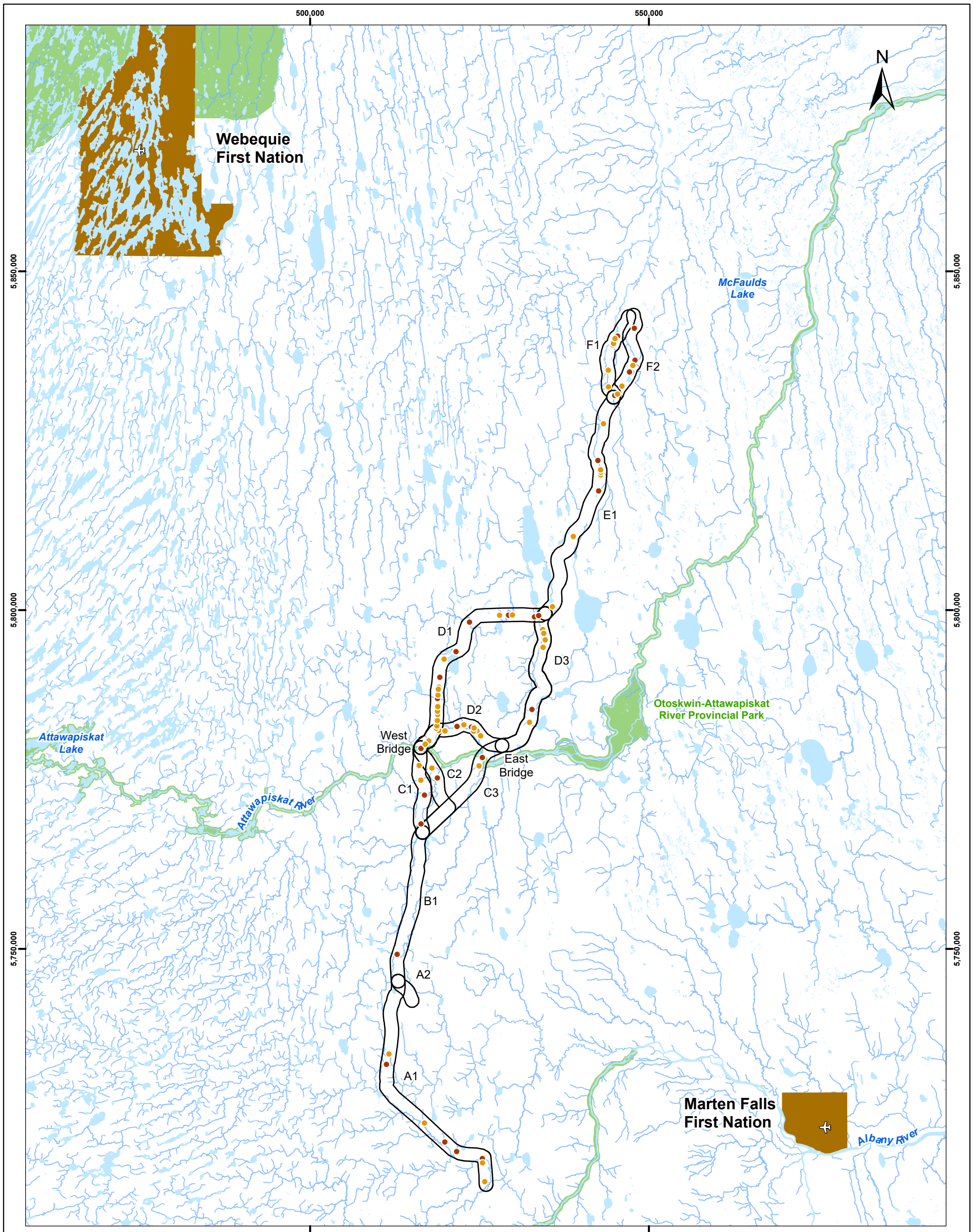
- **Road**
  - Approximate length of 117 km to 164 km (depending on the chosen corridor) of all-season gravel road with a 60 m cleared area and a 100 m right-of-way (ROW).
  - Approximately 11.5 m wide (top width) multi-use road, including undivided lanes (two 3.5 m wide lanes), shoulders and ditches (when required).
- **Water Crossings**
  - There are approximately 76 watercourses and waterbodies that intersect all alternative corridor segments (**Table 10-1; Figure 10-2**). Various combinations of six (6) or seven (7) alternative corridor segments are available to put together a full corridor for the Project. Each corridor is 2 km wide. The actual number of water crossings will not be known until a corridor is chosen as well as the road alignment within that corridor, and could range from approximately 21 to 49 individual watercourse crossings.
  - The width of water crossing ranges from less than 5 metres to greater than 200 m.
  - Depending on the route chosen and subject to further engineering, there are up to 21 water crossings that might require a bridge (i.e., crossing width greater than 25 m) and up to 31 crossings that might require a culvert. The largest crossing is the Attawapiskat River (greater than 200 m).
- **Access Roads**
  - Temporary access roads will be required to support construction activities (e.g., to access water crossing works, work sites or temporary aggregate extraction sites).
  - There may be several permanent access roads (e.g., to access maintenance facilities located along the road and to access one or two long-term aggregate extraction sites).
- **Aggregate Sites**
  - There will be aggregate pits and bedrock quarries and crushing/production facilities (located at quarry sites). The exact number of sites will depend on the chosen corridor and alignment but, order of magnitude estimates are one or two bedrock quarries and five to ten coarse aggregate borrow pits. Glaciofluvial material may be used for embankment fill using a balanced cut and fill approach as much as possible.
  - Most sites are expected to be located within the 2-km wide corridors (**Figure 13-1**) but there could be up to two aggregate sites outside the corridor that would require access roads of approximately of 6 km. Locations will be confirmed during detail design.
  - Preliminary volumes of aggregate that may be required for each alternative corridor segment are presented in **Table 10-1**. Based on the alternative corridors chosen, a preliminary estimate of aggregate material required ranges between 7.5 million m^3 and 11.3 million m^3.
- **Storage/laydown areas, maintenance facilities/yards, construction camps, rest areas, snowplow turnarounds.**
  - The exact number and location of maintenance yards will be dependent upon the preferred alignment but there is expected to be one maintenance yard located every 50 km to 80 km.

› **Construction Camps**

– Camps will be located near key structural locations (major water crossings) and/or about every 20 km along the ROW but locations and sizes will be confirmed during detail design. They will range in size but could accommodate up to 200 personnel; the size will be determined by equipment and other construction needs.

Table 10-1: Preliminary Estimate of Potential Aggregate Volumes and Watercourse Crossings by Alternative Corridor Segment

Alternative Corridor Segment	Segment Length (km)	Preliminary Estimate of Potential Aggregate Volumes (m^3)	Preliminary Estimate of No. Watercourse Crossings (Culverts/Bridges)
A1	39.84	2,521,420	8 (4 / 4)
A2	3.76	385,389	0 (0 / 0)
B1	22.08	894,319	1 (0 / 1)
C1	13.53	1,292,446	5 (2 / 3)
C2	15.42	1,278,943	2 (1 / 1)
C3	20.46	1,067,754	2 (1 / 1)
D1	13.45	2,718,958	6 (14 / 7)
D2	32.62	1,386,816	21 (10 / 2)
D3	16.58	1,949,211	12 (3 / 1)
E1	20.98	2,531,171	4 (6 / 2)
F1	35.47	698,090	8 (5 / 1)
F2	13.57	735,183	7 (3 / 4)



Legend:

- Corridor Alternatives

Water Crossing

- Potential Culvert (Total = 49)
- Potential Bridge (Total = 27)
- Airports
- First Nation Reserve
- Provincial Park
- Waterbody
- Watercourse

30 15 0 Km

SCALE: 1:550,000

Northern Road Link

Potential Water Crossings

Figure Number:	REV:
10-2	PA

Client:	Project Number:	Date:
Marten Falls and Webequie First Nations	679878	2023-01-31

DSC	DRN	CHK	APP
The type of structure (bridge or culvert) is preliminary and may change as the EA process proceeds	AD	ND	ND

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
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10.2 Project Activities and Physical Works

The EAR/IS will include a detailed description of the Project activities for each phase of the Project. A preliminary description of Project activities is presented in the following sections.

These activities are subordinate to the Project and none of them have commenced or are ongoing. As discussed in **Section 2.1**, MFFN and WFN are collectively the proponent of the Project's EA/IA and preliminary design. Proponent options for road ownership, operation/maintenance activities and liability are being considered in ongoing discussions with the Province of Ontario. Since the operator of the Project is unknown at this time, it is currently unknown if some activities will be undertaken by a third party, the nature of the relationship between the proponent and said third party, and whether the proponent has the ability to "direct or influence" the carrying out of the activity. It is also unknown if some of these activities may be solely for the benefit of the proponent or available for other proponents as well. However, it is recognized that should there be a change in Project proponency, all Project conditions, commitments and responsibilities agreed upon during the EA/IA Planning Phase and the EA/IA, including proposed mitigation, would be transferred to the new proponent.

10.2.1 Site Preparation

Site preparation will last for approximately 6 months prior to the start of construction and includes activities to support initiation of construction including tree/vegetation clearing and grubbing as required within the ROW, installing erosion and sediment control measures, developing construction camps in preparation for construction and bringing in equipment, establishing site perimeters, among others.

10.2.2 Construction Activities

The construction phase will encompass all the activities associated with the initial development of the road and ancillary infrastructure. The construction and commissioning of the Project are expected to have a duration of 3 to 10 years (subject to possible seasonal limitations to site access), after securing all the necessary approvals, permits, licences, authorizations and clearances to construct. Pre-construction activities will include field delineation of vegetation buffers and known nearby features of cultural or environmental importance that may require specialized application of mitigation measures or monitoring during construction. Construction activities might be executed year-round (depending on selected alignment and terrain). All construction activities will consider potential effects to the environment and will be implemented in a way that avoids or minimizes these effects.

The detailed construction staging and sequencing of the Project will be determined during detail design through discussions with Indigenous communities, provincial agencies and federal authorities, and the construction contractor. Commissioning of the road for operation will occur shortly after construction is deemed substantially complete.

The main construction activities of the Project that may interact with the natural, socio-economic, human health and cultural environment will include:

- Land surveying, staking and layout;
- Vegetation clearing and grubbing, as required of a 60 m corridor within the 100 m ROW;
- Construction of temporary access roads that will be required to be able to support construction of structural components at water crossings;
- Construction of temporary access roads to aggregate extraction sites, construction camps and laydown areas;
- Construction of temporary ancillary infrastructure that includes storage and laydown areas, access roads/trails, construction camps, and aggregate sites (pits and quarries);

- Construction of permanent ancillary facilities including maintenance yards and storage areas which are intended to mostly be located at the already disturbed footprint areas during the construction phase;
- Earth excavation, grading and hauling operations;
- Aggregate extraction, processing and hauling operations;
- Blasting, as required for aggregate extraction and/or road development;
- Construction of the road, including:
  - Excavation for roadway and ditches, roadway aggregate placement, grading and compaction;
  - Construction of waterbody crossings; and
  - Installation of culverts for water balance, to minimize ponding either side of the road.
- Emissions, discharges and waste:
  - Transport, handling and storage of fuel for equipment and vehicles;
  - Handling and disposal of waste oil, lubricants and other fluid products used for the maintenance of equipment and vehicles;
  - Storage, handing and disposal of solid waste generated at temporary construction camps/work sites and during operations and maintenance activities (e.g., construction waste, domestic waste, wood, cardboard, plastics, foods, metals);
  - Management and/or disposal of wastewater and sewage, both hazardous and non-hazardous, in the form of liquid effluent generated by the temporary workforce/construction camps and construction;
  - Sediment mobilization and discharges from earthwork activities;
  - Noise emissions from equipment and vehicles;
  - Air emissions from the operation of equipment and vehicles, including engine exhaust and dust generation;
  - Vibrations, for example if blasting is required in discrete locations; and
  - GHG emissions as result of the construction and operation of the Project.
- Clean-up and site restoration, including the decommissioning and removal of temporary infrastructure (e.g., access roads), excluding those which may be formalized and used for the operations phase of the Project.

10.2.3 Operation Activities

The operations phase will include all activities associated with operation and maintenance of the road and any other permanent ancillary infrastructure (e.g., operation and maintenance yard, aggregate sites) that will be needed for the life of the road. Where possible, temporary facilities such as construction camps and laydown areas will be repurposed into maintenance facilities.

During the operations phase of the Project, activities such as the assessment of the condition and operating performance of the road surface, drainage system and structures at waterbody crossings will be conducted regularly along the road corridor. The objective of these routine inspections will be to confirm that the road meets the minimum standards for roadside safety and is a reliable connection to allow for the movement of materials, supplies, and people.

The operator of the Project is unknown at this time. However, it is expected that the designated operator of the Project will develop specific operational and maintenance procedures and standards for the road that will be consistent with provincial guidelines for level of service. It is anticipated that the operating and maintenance activities of the Project will include:

- Visual inspections of the road and structures (bridges/culverts) at waterbody crossings;
- Localized surface repairs, resurfacing, and repairs to shoulder as required;

- Use of aggregate sites for road maintenance/repairs;
- Dust control;
- Control of vegetation/brush within the ROW within the cleared zone;
- Winter maintenance – snow clearing and de-icing;
- Road drainage system maintenance work – clean-out/repairs to culverts, ditches and outfalls or ditch inlet structures. This will also include a wildlife monitoring and management component for wildlife (such as beaver), as their activities may impact the drainage network;
- Road traffic;
- Collection and disposal of animal carcasses that may result from vehicle collisions, which may require an *Endangered Species Act* authorization for SAR; and
- Clean-up and site restoration, including the decommissioning and removal of temporary infrastructure (e.g., access roads), excluding those which may be formalized and used for the operations phase of the Project.

There will also be consideration of a number of road use controls that will be discussed between WFN, MFFN, and the Province of Ontario during the EA/IA. How these controls will be executed and enforced will be a function of road ownership and jurisdictional aspects of road operation. However, should there be a change in Project proponency, all Project conditions, commitments and responsibilities agreed upon during the EA/IA Planning Phase and the EA/IA, would be transferred to the new proponent. Some of the road control elements to be discussed include:

- Road access;
- Access to and use of adjacent lands for traditional uses or other activities (e.g., mineral exploration, outfitters);
- Vehicle and operator licensing requirements;
- Insurance coverage requirements and general liability;
- Enforcement/policing responsibility; and
- Emergency response capabilities.

10.2.4 Decommissioning Activities

The Project will be operated indefinitely and decommissioning of the Project is not anticipated. Should decommissioning activities eventually be considered for some or all Project components, decommissioning will be planned and conducted in accordance with the relevant standards and regulatory requirements in effect at that time. If decommissioning activities are required, a detailed review of the potential environmental effects and mitigation measures will be conducted. Consideration of the permanency or temporary nature of supporting infrastructure will be incorporated in the EA/IA. In addition, a description and consideration of Project lifecycle phases (i.e., pre-construction, construction, maintenance and monitoring, decommissioning) will be addressed within the EAR/IS.

Temporary facilities that were built during construction to support construction activities such as aggregate sites (pits and quarries) and temporary access roads to aggregate sites that will not be required during operations and construction camps that will not be repurposed into maintenance yards will be rehabilitated. Rehabilitation requirements will be confirmed during detail design.

10.2.5 Summary of Project Activities by Phase

Table 10-2 provides a summary of Project activities by phase.

Table 10-2: Summary of Project Activities by Phase

Activity	Associated Activities
Site Preparation	
Site preparation	› Tree/vegetation clearing and grubbing within ROW; › Installation of mitigation measures; › Installation of erosion and sediment control measures; › Development of construction camps; and › Establishment of site perimeters.
Construction Phase	
Road construction within an approximately 100 m ROW width over a distance of 117 km to 164 km	› Vegetation clearing and grubbing of road ROW and supportive infrastructure (access road, camps, laydown areas aggregate extraction areas); › Earthworks, excavation, and grading activities; › Construction/installation of permanent culverts and bridges at up to larger waterbody crossings that have widths ranging from 25m up to more than 200 m; › Construction/installation of multi-span bridge waterbody crossings ranging in length from 25 m to 250 m; › Construction/installation of single-span bridge waterbody crossings ranging in length from 25 m to 35 m; › Installation of culverts for waterbody crossings and non-permanent stormwater flows/creeks for length less than 5 m; › Hauling, placement, grading and compaction of aggregate material for roadbed; › Blasting, as required for aggregate extraction and/or road development; › Stockpiling of soils and aggregate; and › Post-construction clean-up and site restoration.
Construction of supporting infrastructure	› Construction and operation of temporary storage and laydown yards; › Construction and operation of temporary access roads, of which some may remain as permanent access roads for use during the operations phase of the Project; and › Construction and operation of construction camps. › Development of aggregate extraction areas (e.g., pits and quarries) with crushing/processing facilities that are subject to obtaining an Aggregate Permit. One or more aggregate extraction areas may be retained for use during the operations phase of the Project.

Activity	Associated Activities
Emissions, discharges and waste	› Transport, handling and storage of fuel for equipment and vehicles; › Handling and disposal of waste oil, lubricants and other fluid products used for the maintenance of equipment and vehicles; › Storage, handling and disposal of solid waste generated at temporary construction camps/work sites (e.g., construction waste, domestic waste, wood, cardboard, plastics, foods, metals); › Domestic waste (e.g., garbage/litter) from road use; › Management and/or disposal of wastewater and sewage, both hazardous and non-hazardous, in the form of liquid effluent generated at the temporary workforce/construction camps; › Air emissions from the operation of equipment and vehicles, including engine exhaust and dust generation; › Air emissions (particulate matter) from earthworks, blasting and hauling; › Greenhouse gas (GHG) emissions as result of the construction of the Project; › Noise emissions from equipment and vehicles; › Vibrations, particularly if blasting is required in discrete areas for road development and/or for obtaining aggregates; › Light pollution; and › Accidental releases.
Operations Phase	
Road operation and maintenance	› Inspection and maintenance/repairs of road and structures at waterbody crossings, including emergency repairs; › Localized surface repairs and full granular resurfacing of road base and shoulder; › Winter maintenance – snow clearing and de-icing; › Management of vegetation/brush within the corridor; › Road drainage system – clean-out/repairs to culverts, ditches and outfalls or ditch inlet structures; › Management of vegetation/brush within the corridor; › Road drainage system – clean-out/repairs to culverts, ditches and outfalls or ditch inlet structures; › As required, collection and disposal of animal carcasses resulting from vehicle collisions; and › Operational use (traffic).
Emissions, discharges and waste	› Transport, handling and storage of fuel for equipment and vehicles; › Handling and disposal of waste oil, lubricants and other fluid products used for the maintenance of equipment and vehicles; › Air emissions from the operation of equipment and vehicles, including engine exhaust and dust generation; › GHG emissions as result of the operation of the Project; › Noise emissions from equipment and vehicles transiting the road; › Noise emissions from equipment used for road maintenance; › Noise emissions from equipment used for road repair; and › Accidental releases.

10.3 Construction Vehicles and Equipment

It is anticipated that the following vehicles and equipment will be used during construction:

- Feller-bunchers;
- Skidders/delimbers;
- Crushing spreads;
- Hauling trucks;
- Excavators;
- Loaders;
- Dozers;
- Graders;
- Packers;
- Water Trucks;
- Backhoes;
- Half tons;
- Fuel tanks;
- Concrete batch plant; and
- Concrete trucks.

This list of vehicles and equipment is preliminary and will be updated in the EAR/IS. The Contractor will be responsible for maintaining the equipment and vehicles, temporary access roads, laydown areas, quarries, and construction camps.

11 Estimated Maximum Project Capacity

For the purposes of developing the preliminary design criteria for the Project, it is assumed the Annual Average Daily Traffic (AADT) volume will exceed 500 vehicles per day however this will be further evaluated in the EA/IA. The design standards for the Project with respect to vertical curvature, maximum grade and minimum road shoulder width will adhere to those established by the Ontario Ministry of Transportation (MTO) for an RCU100 functional highway classification (MTO, 2020b). The design speed for the Project is 100 km/h, with an anticipated posted speed limit of 80 km/h. Preliminary design criteria are summarized in **Table 11-1**.

Table 11-1: Preliminary Design Criteria

Preliminary Design Criteria	Value
Functional Highway Classification	RCU100
Annual Average Daily Traffic (AADT)	Assumed >500 vehicles per day
Design Speed	100 km/h
Posted Speed Limit	80 km/h
Right-of-Way	100 m
Surface	Gravel surface, including shoulders
Road Top Width	Approximately 11.5 m

Note: Preliminary Design Criteria are subject to change.

12 Project Schedule

Preliminary Project phases and timelines include:

- EA/IA (3 to 5 years);
- Permitting and detail design (12 months);
- Site preparation (6 months);
- Construction (3 to 10 years); and
- Operation and maintenance (indefinite).

The Project will be operated for an indefinite period of time; therefore, decommissioning of the Project is not currently anticipated.

Temporary components that are not required for operation of the Project will be decommissioned as they are no longer required.

The EA timeline of 3 to 5 years is based on the duration of field studies that are required to collect baseline data, typical times required to complete an effects assessment and estimated timelines to complete the EA review process.

A 1-year duration has been estimated to finalize the detail design and obtain the required permits that are contingent that level of design and provincial and federal EA approvals.

Once the required permits are obtained, a 6-month site preparation phase will precede the construction phase. During the site preparation phase, the contractor will remove and dispose of trees, shrubs, fallen timber and other surface refuse and will develop quarries and borrow areas, temporary access roads and temporary construction staging areas. It is anticipated that construction equipment will be delivered to site and staged during the site preparation phase, in preparation for the construction phase.

The preliminary schedule for construction is based on the availability of provincial funding opportunities and a preliminary estimated 3-year duration of construction with an additional 7 years of contingency to accommodate uncertainties including funding, labour availability, COVID-19, and weather/climate. It is acknowledged that the NRL will connect with the MFCAR. The EAR/IS will describe the timing of the construction and operation of the Project in relation to the timing of the construction and operation of the proposed MFCAR. A detailed construction schedule will be included in the EAR/IS.

13 Project Alternatives

This section provides a summary of:

- Alternative means to carry out the Project; and
- Alternatives to the Project.

13.1 "Alternatives Means" to Carry Out the Project

"Alternative means" are the various technically and economically feasible ways, including through the use of best available technologies, which would allow a designated project and its physical activities to be carried out. The proponent will consider "alternative means" of carrying out the Project, including:

- Corridor alternatives, for evaluation and selection of a preferred corridor for the Project.
- Ancillary infrastructure alternatives for the preferred corridor.

13.1.1 Corridor Alternatives

Based on initial technical review and feedback from Indigenous communities, the proponent will assess twelve (12) alternative corridor segments, as shown on **Figure 13-1**: A1, A2, B1, C1, C2, C3, D1, D2, D3, E1, F1, F2. Each alternative corridor segment is 2 km wide. The alternative corridor segments have been named from south to north to allow reference to specific segments, as well as a direct comparison. The lengths of the alternative corridor segments are listed in **Table 10-1.**

Various combinations of six (6) or seven (7) alternative corridor segments are available to put together a full corridor for the Project between the start point connecting to MFCAR and the end point connecting to WSR. Accordingly, the potential length of the Project can vary by approximately 47 km (40%), depending on the starting point, where the shortest combination of segments is 117 km and the longest combination of segments Is 164 km.

The 12 alternative corridor segments were identified based on a high-level analysis, focusing on terrain units and known information about SAR, sensitive habitat and community values. **Figure 13-2** presents the alternative corridor segments in the context of terrain suitability, while **Table 13-1** shows the colour coding for terrain suitability. The terrain mapping gradation ranges from less suitable (red) to more suitable (green) terrain and was based on data from the Ontario Geological Survey surficial geology maps and previous terrain and geotechnical studies, orthophotos, stereoscopic air photos, satellite imagery, and Light Detection and Ranging (LiDAR) digital elevation data.

Table 13-1: Terrain Suitability Colour Coding

Red	Orange	Yellow	Green
Less suitable			*More Suitable*
Major Watercourses and Waterbodies: Attawapiskat River is the only major watercourse Waterbodies including lakes and fens (i.e., wetlands interconnected to other waterbodies and/or watercourses). **Permafrost**	**Organic Deposits,** including wetlands (excluding fens covered under Major Watercourses and Waterbodies). **Wetlands**, including peatlands. **Minor watercourses**: smaller creeks and streams (all creeks/streams with the exception of the Attwapiskat River).	**Non-Organic Deposits, as specified:** Marine beach and near-shore deposits; glaciolacustrine beach and near-shore deposits; glaciolacustrine basin deposits; and glacial deposits.	**Non-Organic Deposits, as specified:** Metamorphic and igneous rocks; glaciofluvial ice-contact deposits; and glacial deposits and bedrock, including eskers.

The alternative corridor segments may be refined as a result of new information becoming available during the EA/IA and design of the Project, including from environmental investigations, IK and feedback from consultation and engagement activities. Although multiple segment combinations are possible, there are some restrictions:

- The choice between segments A1 and A2 is entirely dependent on the preferred corridor selected for the MFCAR project;
- Segments B1 and E1 remain the same in all potential combinations;
- Segments C1 and C2 can only connect with segments D1 or D2 to the north;
- Segment C3 can only connect with segment D3 to the north; and
- Segment D3 can only connect with segment E1 to the north.

As such, the assessment of “alternative means” to carry out the Project will evaluate the following combinations of segments to determine the preferred corridor for the Project:

- A1/A2 – B1 – C1/C2 – D1 – E1 – F1/F2;
- A1/A2 – B1 – C1/C2 – D2 – D3 – E1 – F1/F2; and
- A1/A2 – B1 – C3 – D3 – E1 – F1/F2.

500,000
550,000
5,850,000
5,800,000
5,750,000
N
Webequie
First Nation
McFaulds
Lake
F1
F2
E1
D1
D3
D2
Otoskwin-Attawapiskat
River Provincial Park
Attawapiskat
Lake
West
Bridge
East
Bridge
C1
C2
C3
Attawapiskat River
B1
A2
A1
Marten Falls
First Nation
Albany River

Legend:

Corridor Alternatives
- A1
- A2
- B1
- C1
- C2
- C3
- D1
- D2
- D3
- E1
- F1
- F2

- Connection to MFCAR West Alternative
- Connection to MFCAR East Alternative
- Connection to WSR
- Airports
- First Nation Reserve
- Waterbody
- Provincial Park
- Proposed Webequie Supply Road (WSR) Alternatives
- Proposed Marten Falls Community Access Road (MFCAR) Alternatives

30 15 0 Km

SCALE: 1:550,000

Northern Road Link

Corridor Alternatives

Figure Number:	REV:
13-1	PA

Client:	Project Number:	Date:
Marten Falls and Webequie First Nations	679878	2023-01-31

DSC	DRN	CHK	APP
	AD	ND	ND

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04

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500,000
550,000
5,850,000
5,800,000
5,750,000
N
Webequie
First Nation
McFaulds
Lake
Otoskwin-Attawapiskat
River Provincial Park
F1
F2
E1
D1
D3
D2
West
Bridge
East
Bridge
C1
C2
C3
B1
A2
A1
Attawapiskat
Lake
Attawapiskat River
Marten Falls
First Nation
Albany River

Legend:

Terrain Suitability

- Less Suitable
- More Suitable
- Corridor Alternatives
- First Nation Reserve
- Provincial Park
- Waterbody

30 15 0 Km

SCALE: 1:550,000

Northern Road Link

Terrain Suitability

Figure Number:	REV:
13-2	PA

Client:	Project Number:	Date:
Marten Falls and Webequie First Nations	679878	2023-01-31

DSC	DRN	CHK	APP
	AD	ND	ND

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04

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The specific routing within the corridors will be determined during the EA/IA process. Throughout the planning and design phase, modifications to Project design are anticipated to occur based on information that arises through advancement of design, environmental investigations, and the IK and consultation programs. Therefore, it is possible that additional viable alternative routes may be identified during the EA/IA that warrant consideration. Information that becomes known may also suggest all of or portions of the proposed alternative segments are no longer considered reasonable. Should modifications to the alternative corridors be identified during the EA/IA, these will be brought forward for further consultation and engagement.

13.1.2 Alternatives for Ancillary Infrastructure, Project Components and Project Activities

The proponent will consider and assess ancillary infrastructure alternatives for the preferred corridor in the EA/IA. This will include but not be limited to:

1) Alternative sites for temporary and/or permanent aggregate sites (pits and quarries) and crushing/production facilities needed for construction and operation and maintenance of the road, including access roads to these sites;
2) Alternative sites for temporary and/or permanent ancillary infrastructure for construction and operation, including access roads to these sites (e.g., temporary and/or permanent laydown, storage areas and maintenance facilities/yards; construction camps; rest areas; snowplow turnarounds);
3) Watercourse crossing structure types (i.e., culverts, bridges), span length, lifecycle, construction staging methods at waterbody crossings, hydrological and aquatic environment, and long-term maintenance;
4) Road attributes, including roadbed foundation; horizontal alignment, vertical alignment (elevation/profile), and adjustments to the cross-section and ROW width of the corridor; and
5) Construction timing (seasonal) and staging along the ROW to facilitate construction and minimize potential effects on the natural environment and traditional ILRU.

Aggregate sources needed for road construction include glaciofluvial deposits and surficial bedrock. Potential locations for aggregate and bedrock are provided in **Figure 13-3**, based on data from the Ontario Geological Survey, 1:100,000 surficial geology map series, and geospatial data.

500,000
550,000
5,850,000
5,800,000
5,750,000
N
Webequie
First Nation
McFaulds
Lake
F1
F2
E1
D1
D2
D3
West
Bridge
East
Bridge
C1
C2
C3
B1
A2
A1
Attawapiskat
Lake
Attawapiskat River
Otoskwin-Attawapiskat
River Provincial Park
Marten Falls
First Nation
Albany River

Legend:
- Corridor Alternatives
- Bedrock Outcrops
- Potential Aggregate Sources
- First Nation Reserve
- Provincial Park
- Waterbody

30 15 0 Km

SCALE: 1:550,000

Northern Road Link

Potential Aggregate and Bedrock Locations in the Region

Figure Number:	REV:
13-3	PA

Client:	Project Number:	Date:
Marten Falls and Webequie First Nations	679878	2023-01-31

DSC	DRN	CHK	APP
	AD	LM	LM

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04
4. Aggregate sources were derived from the following dataset: Ontario Geological Survey, 1:100,000 surficial geology map series, maps and geospatial data. Potential aggregate sources include glaciofluvial deposits and surficial bedrock.

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13.2 “Alternatives to” the Project

“Alternatives to” a project are functionally different ways to meet the need for the project and achieve its purpose that are technically and economically feasible.

For transportation projects, “alternatives to” the Project typically include options such as new or improved roads, new or improved rail service or air service. However, these alternative methods of transportation would not meet the purpose of the Project, which is the design, construction, and operation and maintenance of a proposed all-season road between the proposed MFCAR and the proposed WSR. The Project would create the opportunity to link two roads, the proposed MFCAR and the proposed WSR. As such, the Project is also proposed to be a road.

The need to build all-season road access to northern communities, was identified in the following provincial planning processes prior to commencement of the Project:

- 25-*year Growth Plan for Northern Ontario, 2011* (MOI and MNDMF, 2011).
- *Building Better Lives: Ontario’s Long-term Infrastructure Plan 2017* (MOI, 2017), which includes a commitment by the province to work with remote communities and other levels of government towards improved access for residents of these communities. The Plan (MOI, 2017) also considers an all-season road to the Ring of Fire a critical step towards realizing the economic benefits of the McFaulds Lake region mineral deposits for people of the region.
- *Connecting the North: A Draft Transportation Plan for Northern Ontario* (MTO, 2021), where the province recognizes that there is a growing demand for the expansion of all-season roads in the Far North.

In addition, MFFN and WFN have entered into a Voluntary Agreement with the provincial Minister of the Environment, Conservation and Parks under which the two First Nations have agreed to undertake an EA for the Project, as an all-season road (MECP, MFFN and WFN, 2020).

There are no “alternatives to” the Project that meet the need and/or achieve the purpose of the Project. As such, the only “alternative to” the Project that will be included in the EA/IA for assessment is “do nothing”. The EA/IA will include an assessment and evaluation of the advantages and disadvantages of proceeding with the undertaking (i.e., the Project) against the “do nothing” or null alternative.”

The “do nothing” alternative is the option of not proceeding with the Project. The “do nothing” alternative provides a benchmark against which other alternatives can be compared. The EA/IA will include the “do nothing” alternative as an “alternative to” the Project, to assess the overall advantages and disadvantages of proceeding with the preferred methods of implementing the Project where a net effect is identified against maintaining the status quo, from a variety of perspectives, including cost/value, environmental effects, social and economic benefit.

If the “do nothing” alternative is chosen as the preferred alternative, there would be no undertaking and EA approval would not be required. The ”do nothing” alternative, compared to the preferred alternative, would not result in any impacts to the environment; nor would the proponent need to undergo an EA/IA if the “do nothing” alternative was selected. The “do nothing” alternative, however, does not address the stated purpose of the Project. If the “do nothing” alternative is selected, the Ring of Fire mineral deposits in the McFaulds Lake area may remain undeveloped and there would be a loss of potential social and economic benefits to MFFN and WFN, as well as to other Indigenous communities and other levels of government. With the “do nothing” alternative, WFN would not have the opportunity to connect to the highway system. WFN would continue to be vulnerable to climate change due to the community’s reliance on seasonal winter roads as the only alternative to costly air transportation. Finally, if the “do nothing” is selected, the communities of MFFN and WFN would not have the benefit of the opportunity to be connected to each other by an all-season roadway.

Part C: Location Information and Context

Part C provides a description of the designated Project's proposed location.

14 Location Description

The Project is a proposed multi-use road between the proposed MFCAR and the proposed WSR, in Northern Ontario. The overall Project location is shown on **Figure 1-1**. The Project will have an approximate length of 117 km to 164 km (depending on the chosen corridor) with a 60 m cleared area and a 100 m ROW not previously used for other projects. The south end of the Project is approximately 150 km north of the Municipality of Greenstone, 480 km northeast of Dryden, 400 km northeast of Thunder Bay, 510 km northwest of Timmins and 1,040 km northwest of Toronto.

The Project is generally bookended by the proposed WSR to the north and the proposed MFCAR to the south. The Project's north terminus will connect to the proposed WSR at its east terminus near McFaulds Lake in the Ring of Fire area. The Project's south terminus will connect to the proposed MFCAR. The proposed MFCAR currently has two alternative corridors under assessment. The point where the Project will connect to the MFCAR will be based on the final MFCAR corridor when it is selected. **Figure 13-1** shows the Project corridor alternatives within the context of these other proposed road projects (i.e., MFCAR and WSR).

The Project will be comprised of a single corridor formed by the selected alternative corridor segments. The selection of the preferred corridor will occur during the EA/IA with input from Indigenous communities and interested persons, discussion with regulators, available IK/ILRU, and information collected during the baseline characterization. The twelve alternative corridor segments that have been identified for the Project are shown on **Figure 13-1**. The final route alignment and associated watercourse crossings, major ancillary features (e.g., ancillary sites, quarry pits, and work camps) will be determined as the assessment and detailed design is prepared.

Aggregate extraction sites (pits and quarries) required to support construction of the Project will be located near or within the study area. The exact location of aggregate sites and any related crushing/production facilities will be confirmed later in the EA/IA process. Most aggregate sites will be rehabilitated after construction, but a few sites will be maintained during operations to provide the aggregate required to maintain the roadway.

Temporary access roads to access aggregate extraction sites may be required and though most will be located near the roadway there may be a few temporary access roads between 1 and 8 km to access more remote aggregate sites. Temporary access roads may be required at larger water crossings depending on the specific terrain at the crossing and the structure types; details will be confirmed during the EAR/IS process and during detail design.

Temporary construction camps and laydown areas will be required to support construction activities. Construction camps could accommodate up to 200 personnel and equipment required for construction at that location. The larger sites will likely be located near major water course crossings or other major construction areas will smaller construction camps may be located along the ROW approximately every 20 km. Where possible, permanent maintenance facilities will be located within repurposed construction camps. Non-repurposed construction camps and temporary access roads will be rehabilitated post-construction.

The Project will not use an existing ROW that has been previously used for a different type of linear project.

14.1 Geographic Coordinates

As the final route is not yet selected the location of all segments being assessed are provided. The geographic coordinates of the northern and southern termini for the twelve alternative corridor segments are provided in **Table 14-1**.

Table 14-1: Geographic Coordinates of Alternatives Corridor Segments – North and South Termini

Alternative Corridor Segment	North Termini (UTM)		South Termini (UTM)	
	X (Easting)	Y (Northing)	X (Easting)	Y (Northing)
A1	513001	5745230	525967	5715220
A2	513001	5745230	515048	5742370
B1	516596	5767191	513001	5745230
C1	516323	5779700	516596	5767191
C2	516323	5779700	516596	5767191
C3	528318	5779993	516596	5767191
D1	534694	5799492	516323	5779700
D2	534694	5799492	516323	5779700
D3	534694	5799492	528318	5779993
E1	544783	5831430	534694	5799492
F1	547050	5843316	544783	5831430
F2	547716	5843525	544783	5831430

Notes: UTM = Universal Transverse Mercator

14.2 Site Map

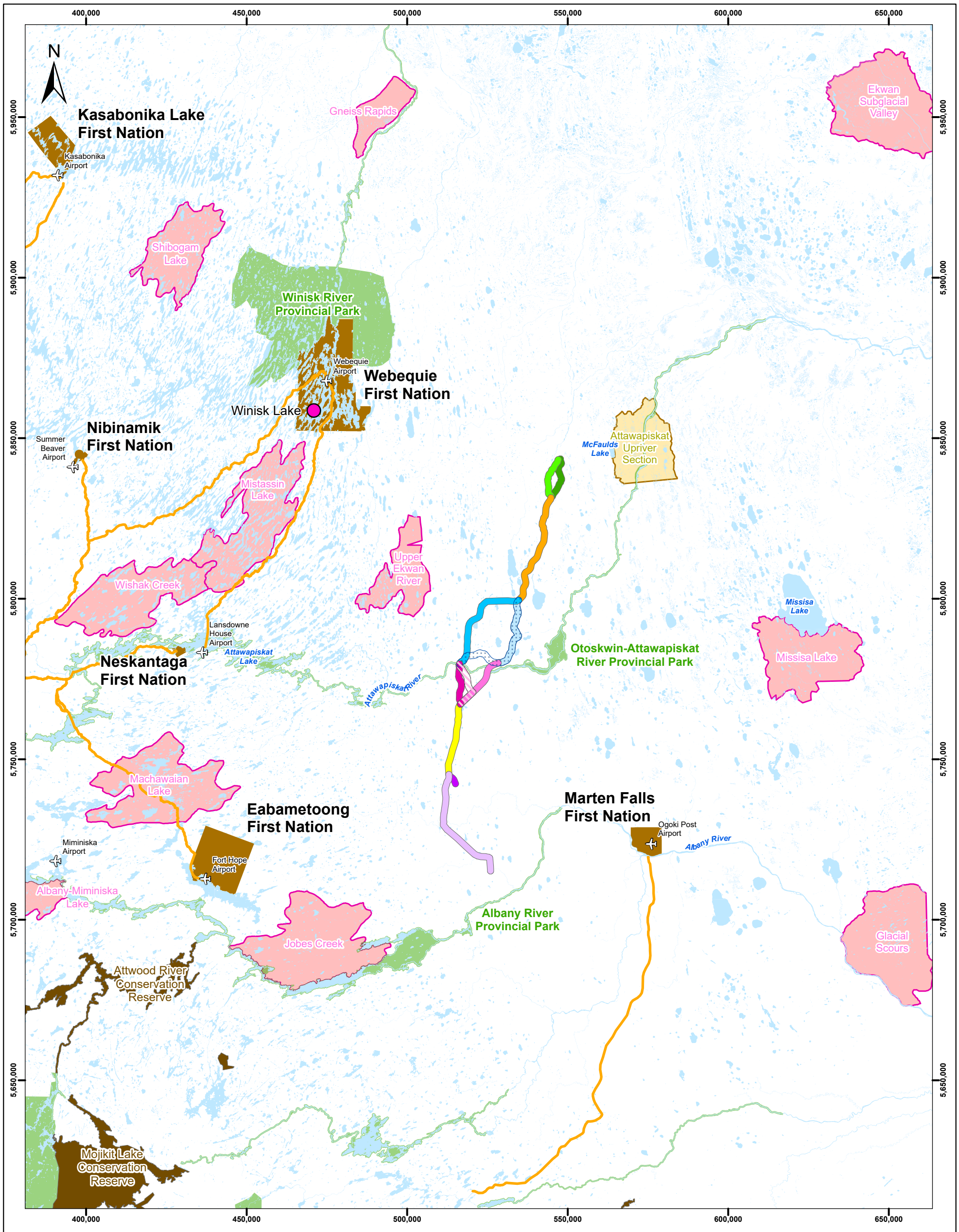
A Project site map is provided in **Figure 14-1** which shows the twelve alternative corridor segments that have been identified for the Project, existing winter road access, First Nation Reserve lands, provincial parks, Areas of Natural and Scientific Interest (ANSI) identified by the provincial government and managed by the MNRF, , waterbodies, conservation reserve, and airports.

14.3 Legal Description of the Land

The Project is located on Crown Land in Ontario within the District of Kenora. There are 38,835 active mining claims in the vicinity of the Project (i.e., within 115 km), and 1,428 of those claims overlap with the Project area. The Crown Land tenure and active claim holders that overlap the proposed Project corridors include the following entities:

- Ring of Fire Metals;
- Wabassi Resources, ULC;
- Ressources KWG Inc./KWG Resources Inc.;
- Fancamp Exploration Ltd.;
- Noront Muketei Minterals Ltd.; and
- Canada Chrome Corporation

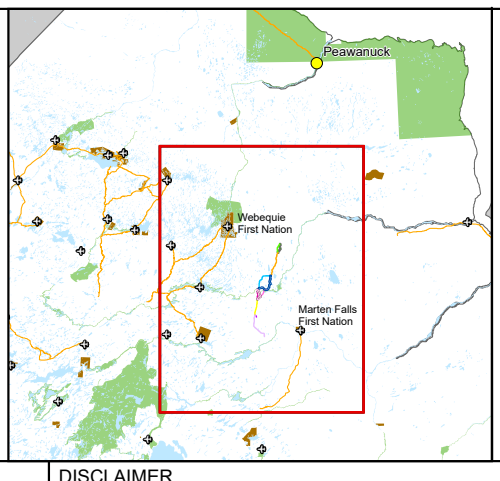
Figure 14-2 shows relevant political boundaries and nearby active and inactive mining claims that overlap with the Project alternative corridors.



Legend:

Corridor Alternatives
- A1
- A2
- B1
- C1
- C2
- C3
- D1
- D2
- D3
- E1
- F1
- F2
- Airports
- Winter Road
- First Nation Reserve
- Waterbody
- Provincial Park
- Conservation Reserve

Areas of Natural and Scientific Interest (ANSI)
- Candidate ANSI, Earth Science
- Candidate ANSI, Life Science
- Winisk Lake - Spruce Shores Lodge and Kanuchuan Outpost Camp
- Peanawuck - Wild Wind Tours



60 30 0 Km

SCALE: 1:1,144,274

Northern Road Link

Project Site Map

Figure Number: 14-1

REV: PA

Client: Marten Falls and Webequie First Nations

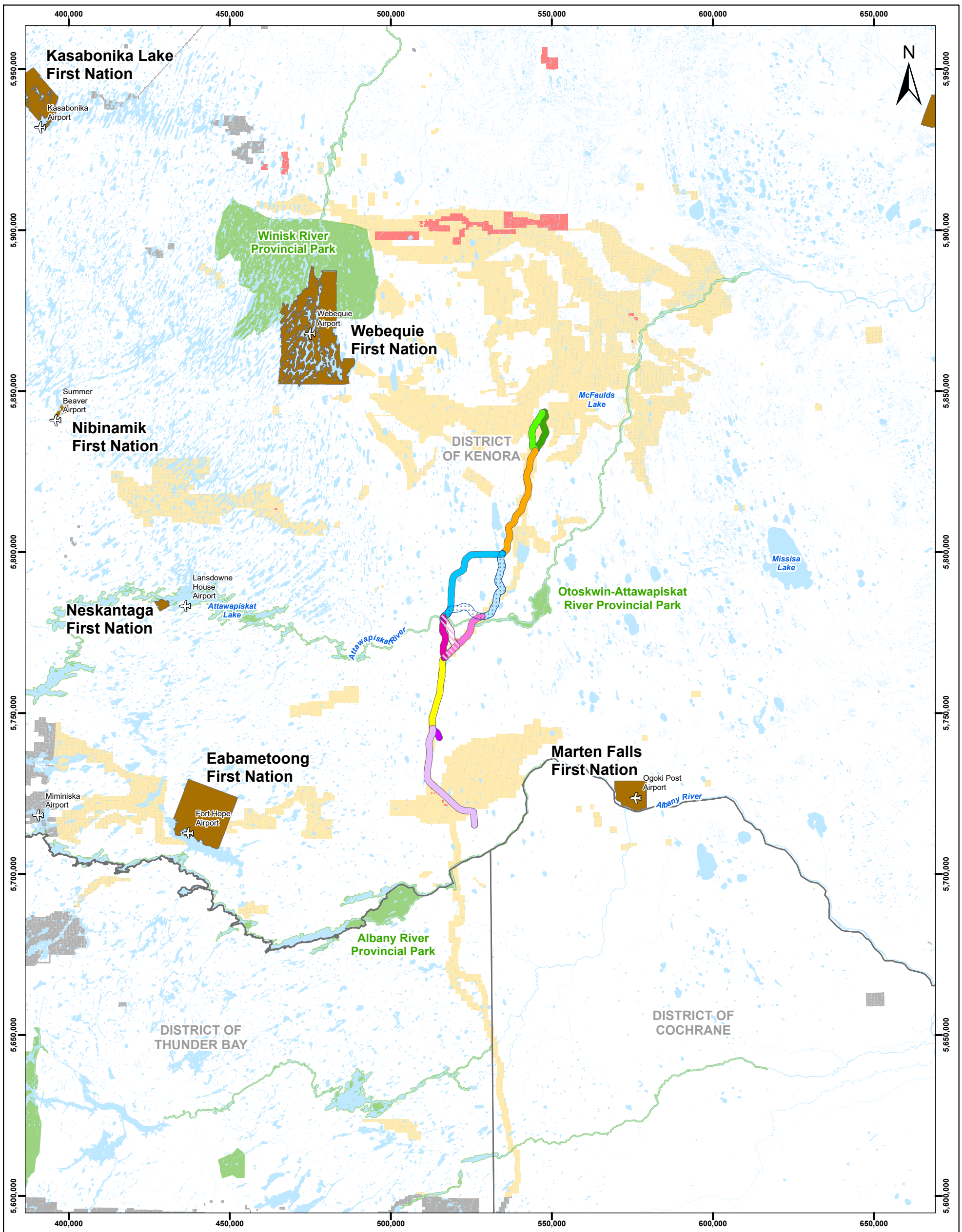
Project Number: 679878

Date: 2023-01-31

DSC	DRN	CHK	APP
	AD	ND	ND

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04



Legend:

Corridor Alternatives
- A1
- A2
- B1
- C1
- C2
- C3
- D1
- D2
- D3
- E1
- F1
- F2
- Airports
- First Nation Reserve
- Waterbody
- Provincial Park
- Upper Tier Municipalities and Districts

Mining Claims
- Active
- Hold Special Circumstances Apply
- Mining Claims over 115 km away from Corridor Alternatives

60 30 0 Km

SCALE: 1:1,144,274

Northern Road Link

Mining Claims

Figure Number: 14-2

REV: PA

Client: Marten Falls and Webequie First Nations

Project Number: 679878

Date: 2023-01-31

DSC	DRN	CHK	APP
	AD	ND	ND

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
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14.4 Proximity to Residences and Nearby Affected Communities

The Project runs between117 km and 164 km in length depending on the preferred alternative. The alternative corridor segments that are closest to nearby communities are summarized in **Table 14-2**. At this early stage of Project development, no other known residences or communities have been identified in proximity to the proposed Project corridor.

Other uses of lands and waters in the vicinity include tourist lodges, fly-in hunting and fishing camps and other tourist-related activities. The Project corridor overlaps with the Otoskwin-Attawapiskat River Provincial Park as shown on **Figure 14-1**.

Table 14-2: Project's Proximity to Nearby Communities

Community	Distance to Closest Alternative Corridor Segment
Webequie First Nation	75 km northwest of alternative corridor segment F1
Marten Falls First Nation	49.5 km east of alternative corridor segment A1
Eabametoong First Nation	70 km west of alternative corridor segment A1
Neskantaga First Nation	86 km west of alternative corridor segment C1
Nibinamik First Nation	135 km northwest of alternative corridor segment D1

14.5 Proximity to Indigenous Lands

The Project will require access to, and the use, occupation, exploration, and development of lands and resources currently used for traditional purposes by Indigenous communities (refer also to **Section 22**).

14.5.1 Land Used for Traditional Purposes by Indigenous Peoples of Canada

The Project is located within lands with adhesion to Treaty No. 9 (1929 – 1930) and in proximity to Treaty No. 9 lands (1905 – 1906), as shown in **Figure 14-3**. It is the proponent's understanding that the Project is within the traditional lands of Métis Nation of Ontario – Region 2 and in proximity to the traditional lands of Métis Nation of Ontario – Region 3. The Project's proximity to Indigenous lands is summarized in **Table 14-3**. It is the proponent's understanding that the Indigenous communities listed in **Table 14-3** practice traditional land uses on their treaty and adhesion to treaty lands in proximity to the Project.

Table 14-3: Project's Proximity to Indigenous Lands

Indigenous Land	Identified Indigenous Communities[8]	Distance to Closest Alternative Corridor Segment
Adhesion to Treaty No. 9, 1929 – 1930	› Aroland First Nation › Attawapiskat First Nation › Kasabonika Lake First Nation › Kingfisher Lake First Nation › Kitchenuhmaykoosib Inninuwug First Nation › Wapekeka First Nation › Wawakapewin First Nation › Weenusk (Peawanuck) First Nation › Wunnumin Lake First Nation	0 km to all alternative corridor segments[(a)]

[8] The Agency provided a list of Indigenous communities and organizations whose Aboriginal and/or treaty rights may be affected by the Project or who may have an interest in the Project. These communities and organizations are identified with an asterisk.

Indigenous Land	Identified Indigenous Communities[8]	Distance to Closest Alternative Corridor Segment
Treaty No. 9, 1905-1906	› 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 › Webequie First Nation	8.73 km south of alternative corridor segment A1

Notes:

(a) A distance of 0 km indicates that the closest alternative corridor segment is located within the Indigenous land.

14.5.2 Land in a Reserve as Defined in Subsection 2(1) of the Indian Act

Under Subsection 2(1) of the *Indian Act,* reserve means a tract of land, the legal title to which is vested in His Majesty, that has been set apart by His Majesty for the use and benefit of a band, including designated lands (except in Subsection 18(2), Sections 20 to 25, 28, 37, 38, 42, 44, 46, 48 to 51 and 58 to 60 and the regulations made under any of those provisions). The Project is in proximity to five First Nation Reserves, as defined in Subsection 2(1) of the *Indian Act*. The proximity of the Project to these reserve lands is summarized in **Table 14-4**.

Table 14-4: Project's Proximity to Land in a Reserve

Land in a Reserve (First Nation Reserve)	Distance to Closest Alternative Corridor Segment
Webequie First Nation	75 km northwest of alternative corridor segment F1
Marten Falls First Nation	49.5 km east of alternative corridor segment A1
Eabametoong First Nation	70 km west of alternative corridor segment A1
Neskantaga First Nation	86 km west of alternative corridor segment C1
Nibinamik First Nation	135 km northwest of alternative corridor segment D1

14.5.3 First Nation Land as Defined in Subsection 2(1) of the First Nations Land Management Act

Under Subsection 2(1) of the *First Nations Land Management Act* (S.C. 1999, c. 24), First Nation land means reserve land or lands set aside to which a land code applies. It includes all the interests or rights in, and resources of, the land that are within the legislative authority of Parliament. Two of the Indigenous communities identified in **Section 4.1** as potentially affected by the Project or that may have an interest in the Project, have a signed Framework Agreement under the *First Nations Land Management Act* (S.C. 1999, c. 24):

› Animbiigoo-Zaagi'igan Anishinaabek; and
› Long Lake #58 First Nation.

The Project's proximity to these two Indigenous communities is shown in **Table 14-5**.

Table 14-5: Project's Proximity to First Nation Land

First Nation Land (Indigenous Community with Signed Framework Agreement Under the *First Nations Land Management Act*)	Distance to Closest Alternative Corridor Segment
Animbiigoo-Zaagi'igan Anishinaabek	212 km southwest of alternative corridor segment A1
Long Lake #58 First Nation	200 km south of alternative corridor segment A1

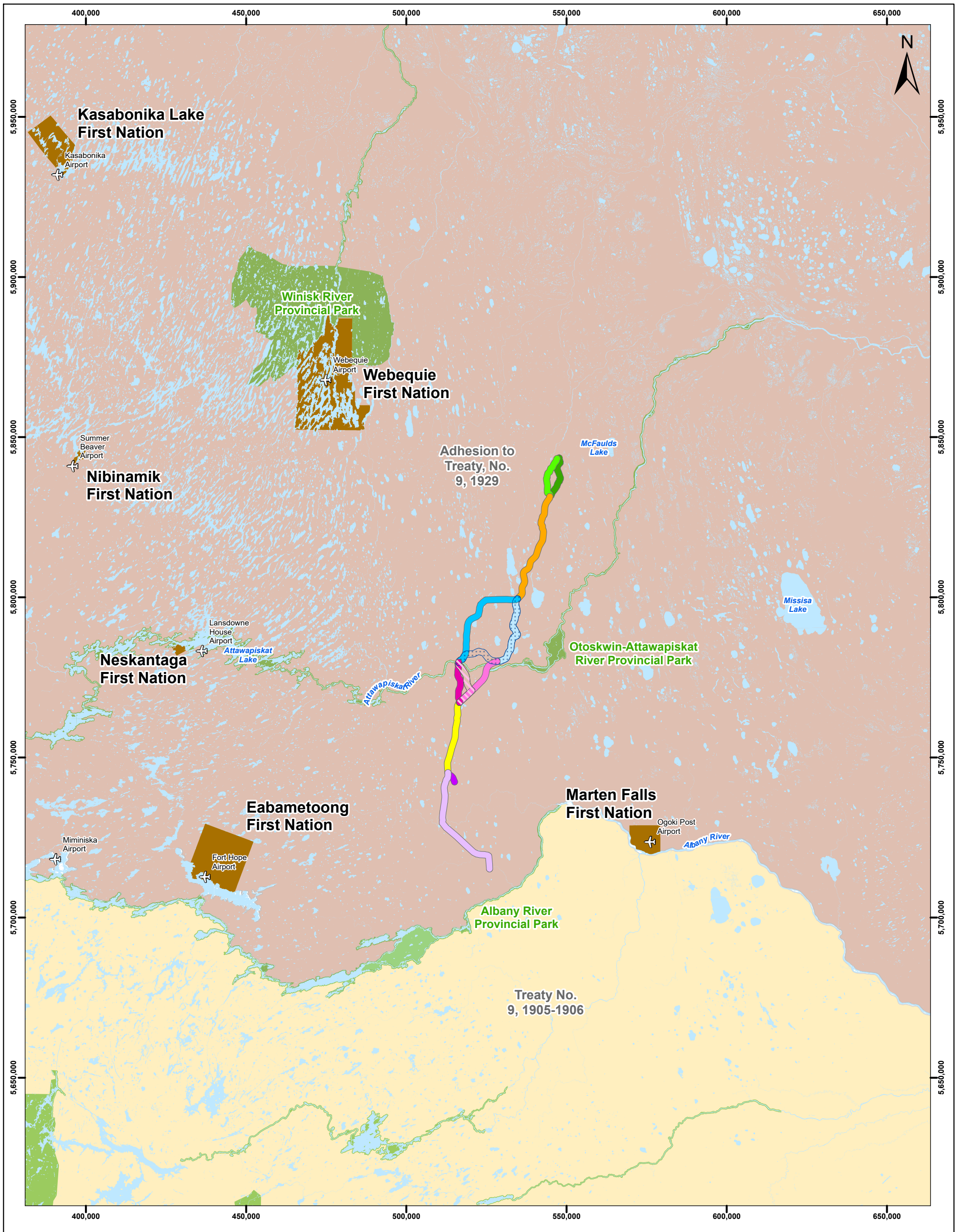
14.5.4 Land that is Subject to a Comprehensive Land Claim Agreement or a Self-government Agreement

Comprehensive land claims deal with the unfinished business of Treaty-making in Canada (GoC, 2015). These claims generally arise in areas of Canada where Aboriginal land rights have not been dealt with by Treaty or through other legal means (GoC, 2015). Self-government agreements put decision-making power into the hands of Indigenous governments who make their own choices about how to deliver programs and services to their communities (GoC, 2020). Self-governing First Nations can make their own laws and policies and have decision-making power in a broad range of matters (GoC, 2020).

The Métis Nation of Ontario is a Provincial Territorial Organization identified in **Section 4.1** as an organization to be notified of the Project to determine their interest in participating in the assessment process. The Métis Nation of Ontario has a Memorandum of Understanding with Her Majesty the Queen (now His Majesty the King) in Right of Canada, as represented by the Minister of Indigenous and Northern Affairs Canada, to establish and participate in an exploratory discussion table for the negotiation of a comprehensive land claim or self-government agreement (GoC, 2019a).

14.5.5 Other Land Set Aside for the Use and Benefit of Indigenous Peoples of Canada

The Project is being undertaken on lands regulated under the Ontario *Far North Act, 2010, S.O. 2010, c. 18.* The *Far North Act* is the legislative foundation for land use planning in the Far North of Ontario (Government of Ontario, 2019). The purpose of the *Far North Act* is to provide for CBLUP in the Far North and sets out a joint Planning Process between First Nations and Ontario.



Legend:

Corridor Alternatives
- A1
- A2
- B1
- C1
- C2
- C3
- D1
- D2
- D3
- E1
- F1
- F2
- Airports
- First Nation Reserve
- Waterbody
- Provincial Park
- Adhesion to Treaty, No. 9, 1929
- Treaty No. 9, 1905-1906

60 30 0 Km

SCALE: 1:1,144,274

Northern Road Link

Project's Proximity to Indigenous Lands

Figure Number:	REV:
14-3	PA

Client:	Project Number:	Date:
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DSC	DRN	CHK	APP
	AD	ND	ND

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04

14.6 Proximity to Federal Lands

The Project is in proximity to five federally designated First Nation Reserves, the distance to these reserve lands, as defined in Subsection 2(1) of the *Indian Act*, is summarized in **Table 14-6**. The reserve lands are represented on **Figure 14-1**.

No other federal lands are in proximity to the Project.

Table 14-6: Project's Proximity to Federal Lands

Federal Land – First Nation Reserve	Distance to Closest Alternative Corridor Segment
Webequie First Nation	75 km northwest of alternative corridor segment F1
Marten Falls First Nation	49.5 km east of alternative corridor segment A1
Eabametoong First Nation	70 km west of alternative corridor segment A1
Neskantaga First Nation	86 km west of alternative corridor segment C1
Nibinamik First Nation	135 km northwest of alternative corridor segment D1

15 Description of the Physical and Biological Environment

This section provides a brief description of the physical and biological environment of the Project's location, based on information that is available to the public. The environmental descriptions below describe the general Project region which contains the anticipated Project footprint including the alternative corridors and ancillary infrastructure.

15.1 Physical Environment

15.1.1 Air Quality

15.1.1.1 Preliminary Baseline Description

The Project is located in a remote region of Ontario away from any significant sources of human induced air emissions, there are no local Ministry operated ambient air monitoring stations within the vicinity of the Project.

Due to the remote location of the Project, the surrounding environment is considered to be a pristine setting. Through a preliminary review of the Project area, it was confirmed that there are no large anthropogenic sources of emissions such as large industrial or transportation sources within the study area. As such, local air quality is not expected to be significantly influenced by anthropogenic sources of emissions. Forest fires may influence or contribute to particulate matter concentrations in the surrounding environment.

15.1.1.2 Proposed Baseline Studies

A desktop analysis of existing information sources will be completed to identify information gaps that will need to be addressed through further study.

To characterize baseline air quality within the Project area, ambient air quality concentrations of select indicator compounds will be captured from the MFCAR ambient air quality monitoring program. Data gathered in the MFCAR monitoring program is considered representative of the preferred corridor due to its proximity and airshed similarity in terms of there not being significant industrial or residential development within the airshed.

Data from the MFCAR monitoring program will be used for the following indicator compounds:

- Particulate matter ($PM_{2.5}$);
- Ozone;
- Nitrogen oxides (NO_x);
- Sulphur dioxide (SO_2); and
- BTEX (benzene, toluene, ethylbenzene, and xylene).

Up to one year of ambient air quality data will be collected from the MFCAR program and incorporated when establishing baseline air quality. The results of the MFCAR monitoring program will be statistically summarized based on the averaging periods of the applicable standards and criteria:

- Canadian Ambient Air Quality Standards (CAAQS) (CCME, 2021); and
- Ontario's Ambient Air Quality Criteria (AAQC) (MECP, 2020b).

Other particulate matter size fractions (TSP and PM_{10}) will be determined by using measured $PM_{2.5}$ data to calculate TSP and PM_{10} background data. As $PM_{2.5}$ is a size fraction subset of PM_{10}, and PM_{10} is a size fraction subset of TSP, the PM_{10} and TSP background concentrations can be estimated based on the $PM_{2.5}$ background concentration.

A literature review will be completed to gather representative particulate ratios that are considered to be reflective of the study area. This literature review may include an analysis of historical data collected at representative monitoring stations such as those included within the ECCC's National Air Surveillance Program (NAPS) program, and a review of the United States Environmental Protection Agency (US EPA) studies and supporting documentation.

BTEX and particulate matter will be used as surrogates for polycyclic aromatic hydrocarbons and diesel particulate matter which cannot be sampled for due to equipment limitations coupled with serviceability challenges given the remote location of the community. Concentrations of specific relevant contaminants such as acetaldehyde, formaldehyde, 1,3-butadiene, and acrolein will be estimated based on monitored BTEX concentrations and published emission factors, such as the US EPA AP-42 emissions database (US EPA, 2021).

Ambient concentrations of carbon monoxide (CO) will be estimated based on data collected from representative monitoring stations that are included within the ECCC's NAPS program.

Anticipated diesel particulate matter (DPM) emissions as a result of the Project will be included in the air quality assessment, hence background DPM concentrations will be compiled. Due to the technical limitations of measuring DPM, background DPM concentrations will be estimated based on the relative magnitude of emissions in the community. A cursory emission inventory will be developed for the MFCAR program based on available data. This inventory will be used to speciate measured particulate concentrations.

15.1.2 Greenhouse Gases

15.1.2.1 Preliminary Baseline Description

Due to the remote location of the Project, the surrounding environment is considered to be a pristine setting. Through a preliminary review of the Project area, it was confirmed that there are no large anthropogenic sources of emissions such as large industrial or transportation sources within the study area; as such, baseline GHG emissions and sequestration processes are expected to be dominated by naturally occurring processes such as the decay of organic matter and carbon uptake from vegetation.

15.1.2.2 Proposed Baseline Studies

A desktop analysis of existing background information and data sources will be completed to compile existing provincial, federal and sectoral GHG emission totals.

15.1.3 Noise

15.1.3.1 Preliminary Baseline Description

Due to the remote location of the Project, the surrounding acoustic environment is expected to be dominated by sounds of nature (e.g., rustling leaves, animal calls) with little to no influence from anthropogenic noise sources. As such, the expected ambient noise levels along much of the Project route are expected to be consistent with those found in rural areas (i.e., 35 to 45 dBA [Health Canada, 2017]).

15.1.3.2 Proposed Baseline Studies

The desktop analysis will consist of identifying representative Noise Sensitive Receptors (NSRs) within the Noise Sensitive Areas (NSAs) for the Project and characterizing their existing acoustical environment.

Locations of NSRs within 1.5 km of the preferred corridor will be identified through the study of available information. The inventory of the NSRs will be reviewed and where appropriate, NSRs will be grouped together based on anticipated similar noise levels. For this Project, NSRs may include (but not limited to): permanent and seasonal residences, hunting/fishing/trapping cabins, camps, SAR habitat features (e.g., caribou nursing habitat), spiritual or sacred spaces that are identified by Indigenous communities, groups and stakeholders.

Input will be sought to select sensitive receptor locations through discussions with Indigenous communities, government agencies and other stakeholders.

Ambient noise monitoring that is gathered as part the WSR project and MFCAR project near the south and northeast terminuses of the NRL and the published Health Canada (2017) noise levels (i.e., 35 to 45 dBA) will be used to appropriately characterize the ambient levels at relevant NSRs, where applicable.

15.1.4 Groundwater

15.1.4.1 Preliminary Baseline Description

A hydrogeological study was completed by KBM Resources Group for the MFFN Industrial Supply Road in 2019. The study was a desktop analysis focusing on understanding of the existing physical settings including physiography, geology, groundwater and groundwater users in the vicinity of the Project. A very brief description of the hydrogeological conditions was provided in the report. No field work and associated data collection including groundwater level monitoring, groundwater quality sampling and hydraulic conductivity testing was carried out. In general, the hydrogeological environment can be described as follows (KBM, 2019a):

- Crystalline (igneous and metamorphic) rocks of the Canadian Shield are characterized by low sparse fracture networks with low-potential aquifers, which also contributes to slow groundwater movement and recharge. Groundwater recharge in these fracture zones is highly localized (Cloutier et al., 2007).
- Groundwater quality from these fractured rock zones is affected by the presence of metal contents in the bedrock (Chesnaux, 2013).
- The shallow bedrock groundwater system is characterized by many small, localized aquifers. In most parts of the Canadian Shield, these aquifers may be connected to overburden aquifers. The shallow groundwater system is considered an important source of water supplies, especially in the areas where the overburden is absent or thin (Singer and Cheng, 2002).
- Overburden aquifers, particularly associated with moraines and eskers, are often important sources for drinking water supplies.

15.1.4.2 Proposed Baseline Studies

Desktop Analysis

An overview of the hydrogeological environment will be compiled from existing data sources. Preliminary review of the provincial water well database identified many well records. These identified wells will be further categorized and evaluated during the baseline study, and groundwater usage evaluated.

Field Investigations

Field investigations will be completed to fill identified data gaps, including monitoring well installation, groundwater level monitoring, water quality sampling and laboratory analysis, and hydraulic conductivity testing along the road alignment including alternative corridors, and in potential aggregate sites (pits and quarries).

Temporal variation or patterns in potential effects associated with different criteria will also be considered (e.g., differential water quality and related effects of the road versus aggregate sites during the construction and operations phases). In general, baseline data collection will be carried out over three events (e.g., spring, summer, and fall) to capture seasonal variations of groundwater levels and water qualities, unless specified otherwise.

Field investigations will comprise borehole drilling and installation of shallow monitoring wells (less than 5 m) in the overburden in order to cover different soil types and deep wells (more than 5 m, either in overburden or bedrock). In addition, wells will need to be installed at potential aggregates sites (pits and quarries). The final well number and locations will be determined in conjunction with the geotechnical work plan. Surface water crossings will also need to be considered when choosing the well locations. In addition, piezometers will be installed and monitored for groundwater levels in peatland areas, which will be pre-mapped prior to the fieldwork for the assessment of groundwater and surface water interactions and the peatlands functions.

Groundwater sampling is expected to be conducted at least for three events, e.g., spring, summer and fall events to cover seasonal and annual water quality variations. One-time hydraulic conductivity testing will also be conducted in all the new wells, expected to be completed during the second sampling event.

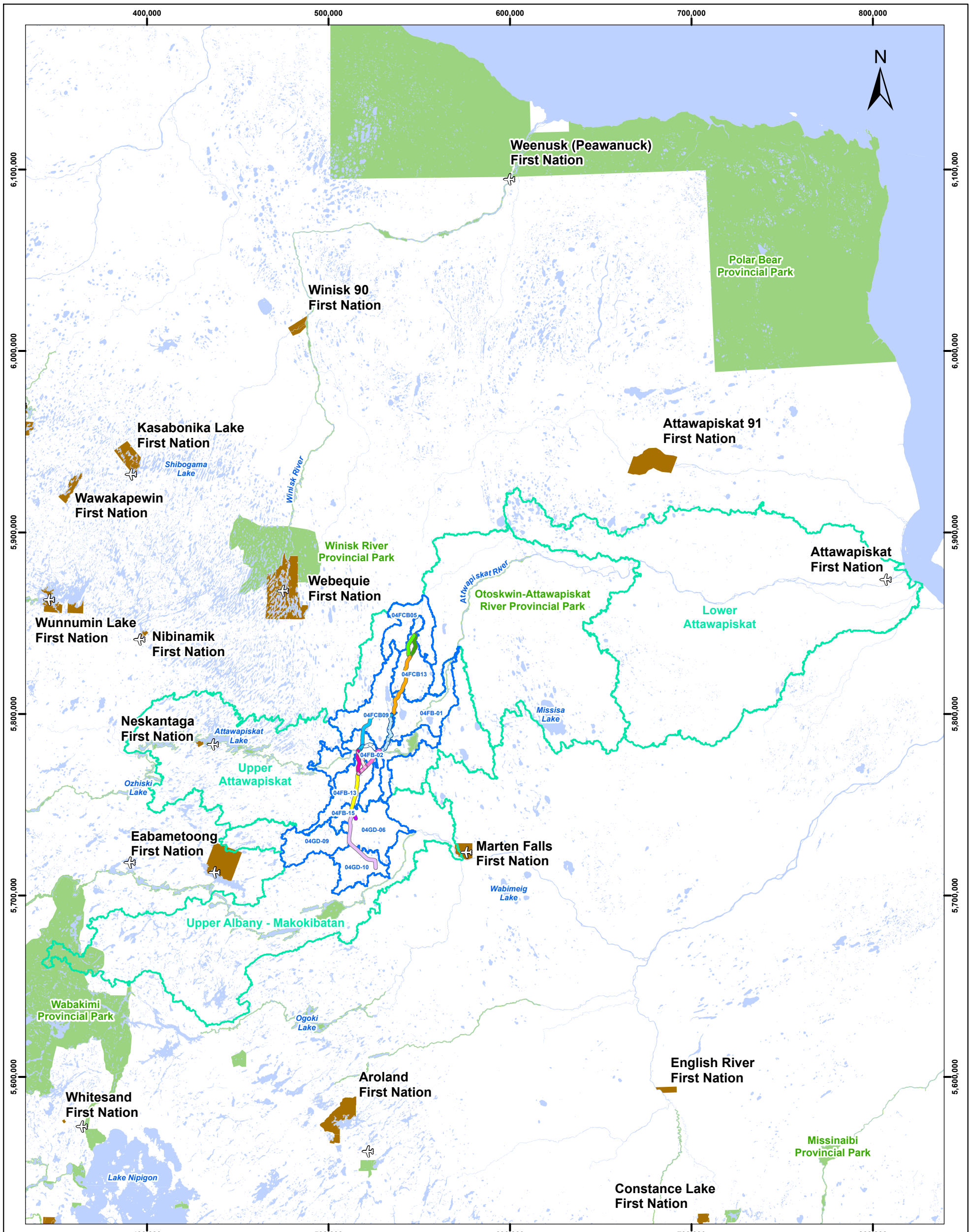
15.1.5 Surface Water

15.1.5.1 Preliminary Baseline Description

The Hudson Bay Lowlands is a vast expanse of pristine wetlands broken up by glacial deposits, large rivers and lakes, and thousands of streams, creeks, ponds and other waterbodies. Water flows over and through this landscape maintaining its aquatic and terrestrial ecosystems and providing navigation and nourishment for local communities.

The Project is situated within the watersheds of the Attawapiskat and Albany Rivers. These two rivers drain a combined 185,500 km^2 area of land, stretching from Hudson Bay and James Bay to the headwaters of the Lake Superior watershed in Northern Ontario. **Figure 15-1** shows the proposed Project in the context of its intersecting tertiary and quaternary watersheds. Waters from quaternary watersheds flow toward the main branch of their tertiary watersheds, which in turn flow towards the main branch of their secondary watersheds. All secondary watersheds in the Hudson Bay Lowlands flow generally north and east towards Hudson Bay or James Bay. The streams flowing into these rivers and their tributaries are low gradient and low velocity. Flows peak during the spring freshet, are reduced during the summer, and increase again in the late summer and early fall due to increased precipitation. Flows are lowest during winter due to watercourse freezing and much of the precipitation falling as snow (SNC-Lavalin, 2020).

The filtering capacity of wetlands and the lack of regional development contribute to excellent water quality throughout the majority of the hydrological environment surrounding the Project. Common exceedances observed include acidity, hardness, true colour, and dissolve organic carbon. Occasional exceedances observed include iron, manganese and aluminum (Golder, 2013a).



Legend:

Corridor Alternatives

- A1
- A2
- B1
- C1
- C2
- C3
- D1
- D2
- D3
- E1
- F1
- F2

- Quaternary Watersheds Intersecting Corridor Alternatives
- Tertiary Watersheds Intersecting Corridor Alternatives
- Airports
- First Nation Reserve
- Provincial Park
- Waterbody

110 55 0 Km

SCALE: 1:2,050,000

Northern Road Link

Quaternary and Tertiary Watersheds

Figure Number:	REV:
15-1	PA

Client:	Project Number:	Date:
Marten Falls and Webequie First Nations	679878	2023-01-31

DSC	DRN	CHK	APP
	AD	CB	CB

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04

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15.1.5.2 Proposed Baseline Studies

Desktop Analysis

A desktop analysis of existing background sources and data will be completed to:

- Generate the required data inputs to optimize the precision and accuracy of hydrological modelling, including land use/type information, topography, historical climate data, and future climate projections;
- Contextualize watercourses within their larger watersheds;
- Survey surface water impacts and mitigation measures studied or implemented for other linear infrastructure project in comparable environmental settings; and
- Inform site selection for field reconnaissance.

Field Studies

Surface water samples will be collected from the maximum feasible number of accessible crossings during field investigations and sent for laboratory analyses. To capture seasonal variability in baseline surface water quality, surface water sampling will be conducted as follows:

- Fall period (typically October);
- Spring period (typically April and May); and
- Summer period (typically July and August).

No winter sampling is proposed due to limited location access and related health and safety concerns.

The surface water field program will include collecting flow data and bathymetry data at the water quality sampling locations, where it is safe to access according to site conditions at the time of site visit. These measurements will provide data on conditions at the time of measurement but may not be representative of maximum and mean surface water flows.

Where flow-related information is unavailable or limited, flow (including maximum and mean) will be estimated based on data from adjacent areas. Regional methods for pro-rating flow data are published in hydrological textbooks for low flows as well as for other flow regimes. These methods are commonly known as: isoline, graphical index, statistical index and regression. The use of these methods is generally qualified based on the transferability of the data. The suitability of applying gauged station data to the study area will be assessed as part of the surface water program.

As part of the baseline assessment, water quality measurements of surface water features located in close proximity (e.g., within 100 m, with consideration given to any steep topography) to the road and other supportive infrastructure will be conducted. It is recognized that it may not be feasible to assess all surface water features within the study area, but field work will focus on significant crossings.

In-situ water quality parameters to be monitored during field work will include, at a minimum:

- Temperature;
- Dissolved oxygen;
- Conductivity;
- Turbidity; and
- pH.

Samples will also be collected for lab analysis of the following parameters:

- Alkalinity;
- Total suspended and dissolved solids;
- Cations and anions;
- Metals (including hexavalent chromium and mercury [total mercury and methylmercury]);
- Total phosphorus;
- Nitrate and nitrite;
- Ammonia; and
- Total Kjeldahl nitrogen.

Surface water quality will be reviewed against the best available water quality guidelines. In most cases sample results will be compared against provincial water quality objectives; however, the Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guideline for the Protection of Aquatic Life may be more appropriate, specifically for suspended sediment and turbidity, and where CCME guidelines are based on newer available science.

15.1.6 Geology, Terrain and Soils

15.1.6.1 Preliminary Baseline Description

The Project is within the geographic bounds of the Superior Province, a collage of oceanic and tectonic plates that formed between circa 2.72 and 2.68 Ga and, for the most part, has been stable since circa 2.5 Ga. The Hudson Bay Lowlands are underlain by Phanerozoic rock and bounded by Precambrian (Canadian Shield) structures (Martini, 1988). **Figure 15-2** shows the distribution of bedrock types in the vicinity of the Project and **Figure 15-3** shows known mineral deposits. The terrain is dominated by wetlands weakly broken by bedrock outcrops, rivers, moraines and eskers, among other surficial formations. Surficial deposits in the region consist of unstratified post-glacial till interspersed by stratified till and bedrock. The surficial materials in the vicinity of the Project are predominantly clayey silt to clay matrices with low to moderate clast content and moderate to high carbonate content (Barnett et al., 2013a,b).

Glaciofluvial esker deposits are common in the vicinity of the Project. Eskers are ridges that typically consist of a core of stratified sands and gravels. In esker deposits, the soils are much better drained, there is little surface organic material, and the groundwater table is further below the surface (SNC-Lavalin, 2020). These attributes lead to unique vegetation profiles and wildlife habitats/uses along the eskers.

Soils in the vicinity of the Project are primarily organic peat, muck and, marl with slow plant decay and poor drainage. Soil development in the region varies depending on the degree of drainage, with low lying areas containing undeveloped organic and other (regosolic) soils. The organic surface layer typically ranges from 1 m to 2 m in thickness. It is underlain by a clay/silt till layer up to 2 m thick, and a quaternary till layer up to 5 m thick. Depth to bedrock ranges from 5 m to 12 m below the surface (JDMA, 2019).

The Project passes over two distinct bands of Canada's permafrost region (Heginbottom et al., 1995) including the 'Sporadic Discontinuous Permafrost' and 'Isolated Patches of Permafrost'. In the sporadic permafrost band, 10% to 50% of the land area is underlain by permafrost, which varies in thickness, may not be present in the active layer, and contains less than 10% ground ice content in the upper 10 m to 20 m. In the isolated patches of permafrost band, less than 10% of the land is underlain by permafrost. The thickness of permafrost in both bands may be influenced by soil and rock type, snow cover and proximity to waterbodies.

Legend:

Corridor Alternatives

- A1
- A2
- B1
- C1
- C2
- C3
- D1
- D2
- D3
- E1
- F1
- F2
- Airports

- First Nation Reserve
- Provincial Park
- Waterbody
- 56: Limestone, dolostone, shale
- 55: Sandstone, dolostone, limestone
- 16: Hornblendite - nepheline syenite suite (saturated to undersaturated suite)
- 15: Massive granodiorite to granite
- 14: Diorite-monzondiorite-granodiorite suite (saturated to oversaturated suite)
- 13: Muscovite-bearing granitic rocks
- 12: Foliated tonalite suite
- 11: Gneissic tonalite suite
- 10: Mafic and ultramafic rocks
- 8: Migmatized supracrustal rocks
- 7: Metasedimentary rocks
- 6: Felsic to intermediate metavolcanic rocks
- 5: Mafic to intermediate metavolcanic rocks
- 4: Mafic to ultramafic metavolcanic rocks

30 15 0 Km

SCALE: 1:570,000

Northern Road Link

Bedrock Geology

Figure Number:	REV:
15-2	PA

Client:	Project Number:	Date:
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	AD	ND	ND

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500,000
550,000
5,850,000
5,800,000
5,750,000
N
Webequie
First Nation
McFaulds
Lake
Attawapiskat
Lake
Attawapiskat River
Otoskwin-Attawapiskat
River Provincial Park
Marten Falls
First Nation
Albany River

Legend:

Corridor Alternatives
- A1
- A2
- B1
- C1
- C2
- C3
- D1
- D2
- D3
- E1
- F1
- F2

- Ontario Mineral Inventory
- Wabassi Deposit
- Tempest Zone Occurrence
- Airports
- First Nation Reserve
- Provincial Park
- Waterbody

NRL
Northern Road Link

30 15 0 Km

SCALE: 1:570,000

Northern Road Link

Known Mineral Deposits

Figure Number:	REV:
15-3	PA

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
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15.1.6.2 Proposed Baseline Studies

Desktop Analysis

A desktop analysis of existing background information and data sources will be completed to compile existing data and identify information gaps that will need to be addressed through further study. Satellite and aerial imagery, regional and higher resolution LiDAR digital elevation data, surficial geology, hydrology, and land cover data will be used to document the surficial materials, topography, hydrology, peatlands and ground conditions within the 2-km wide preferred corridor and to develop a terrain map. The mapping will be accompanied by descriptions of the various terrain units and will delineate the different landforms within the corridors, including glaciofluvial deposits/eskers, glaciolacustrine deposits, till, peatlands/wetlands, bedrock, and others. Maps of potential aggregate sources will also be developed for the preliminary engineering design and presented in the baseline description for geology, terrain and soils.

Field Studies

Field studies will be conducted to further develop the terrain map along the 2-km wide preferred corridor, including a ground-truthing terrain survey, assessment of potential aggregate sources, and a geotechnical drilling program. The field geotechnical investigation program will include drilling and sampling in conjunction with field Standard Penetration Testing (SPT) to determine the subsurface stratigraphic units. Samples will be collected and sent for laboratory analysis which are anticipated to include but not be limited to moisture content, grain size distribution, Atterberg Limit for soil classification, compaction testing, soundness testing, strength testing, and acid rock drainage/metal leaching (ARD/ML). Detailed stratigraphic borehole logs will be prepared.

15.1.7 Visual Environment

15.1.7.1 Preliminary Baseline Description

The general area of the Project is dominated by wetlands (e.g., bogs, fens, swamps and marshes) within the Hudson Bay Lowlands physiographic region, which is characterized by low lying, poorly drained terrain dominated by muskeg and bog. The thickness and distribution of unconsolidated (quaternary) sediments are the result of extensive glacial activity. As the ice sheet stagnated, major sand and gravel deposits were laid down, including eskers and ice-contact deposits. As a result, features in the Project area include wetlands, bedrock outcrops, eskers and moraines.

15.1.7.2 Proposed Baseline Studies

Desktop Analysis

A desktop analysis of existing information sources will be completed to identify information gaps that will need to be addressed. It is anticipated that concurrent studies related to natural environment and IK will supplement the data that is currently available through existing information sources.

To define the existing visual aesthetic environment, the team will prepare a detailed mapping dataset for the purpose of the Visual Environment Assessment, from existing project LiDAR and MNRF Provincial Digital Elevation Model (PDEM), and potential additional imagery and topography, provincial vector base mapping, provincial reports and plans, CBLUPs, tourism and recreation resources, natural features (waterways), natural heritage resources, Indigenous lands and sensitive locations identified by other study disciplines (i.e., IK, land and resource uses, socio-economic) and from previous studies.

The detailed mapping datasets will be supported by a description of the landscape units within the Project identifying landscape settings and features of importance. The focus will be on valued viewpoints by Indigenous community members and the stakeholders identified by other study team disciplines as contributing to the visual character of an area.

Field Studies

Primary data will also be collected through fieldwork. Selected sensitive receptor locations will be inventoried through field reconnaissance using a high-accuracy professional GPS receiver paired with ruggedized tablets running Esri Collector field mapping software and photographed with a single lens reflex camera with a 55 mm focal length. Each location will be recorded to accuracies required by the Project and then immediately classified, evaluated and ranked (view subject, vantage point, and visual corridor) in the field using a custom-built Collector mapping application.

15.2 Biological Environment

15.2.1 Fish and Fish Habitat

15.2.1.1 Preliminary Baseline Description

There are many different waterbodies in the areas surrounding the Project, including streams, rivers, lakes, ponds and wetlands that provide direct habitat and support many different fish species. The Attawapiskat River is the largest river crossing. There is also a vast network of smaller connected headwater streams, ponds and lakes. Many of these smaller streams are part of open fens. The larger lakes and watercourses provide year-round fish habitat; the smaller, shallower lakes and wetlands often do not, as oxygen levels can drop to hypoxic conditions. The smaller watercourses and lakes can also provide suitable habitat for rearing and feeding for some parts of the year, usually early spring.

There are a vast number of streams in the areas surrounding the Project that connect to many shallow lakes and wetlands. In general, waterbodies in the region are considered to support a variety of cool and cold-water fish. The Attawapiskat River supports populations of Walleye (*Sander vitreus*), Lake Sturgeon (*Acipenser fulvescens),* Brook Trout (*Salvelinus fontinalis*), Lake Whitefish (*Coregonus clupeaformis*) and other fish species. A number of lower energy watercourses connected to these rivers provide habitat for Walleye and Northern Pike (*Esox lucius*). Typically, Yellow Perch (*Perca flavescens*), White Sucker (*Catostomus commersonii)* and other small foraging fish species are present with these larger bodied fish. Smaller streams and lakes also support a variety of smaller bodied fish including cyprinid species such as Brook Stickleback (*Culaea inconstans*), Fathead Minnow (*Pimephales promelas*), and Finescale Dace (*Phoxinus neogaeus*). Through the review of various sources there are 32 fish species, including one SAR (Lake Sturgeon), that may occur in the watercourses and waterbodies in the vicinity of the Project as shown in **Table 15-1**. SAR are discussed in **Section 15.2.5**.

Table 15-1: Potential Fish Species Present in the Vicinity of the Project

Fish Species Common Name	Scientific Name
Brook Stickleback	*Culaea inconstans*
Ninespine Stickleback	*Pungitius pingitius*
Brook Trout	*Salvelinus fontinalis*
Northern Pike	*Esox lucius*
Lake Sturgeon[(a)]	*Acipenser fulvescens*
Walleye	*Sander vitreus*
Yellow Perch	*Perca flavescens*
Lake Whitefish	*Coregonus clupeaformis*
Round Whitefish	*Prosopium cylindraceum*
Fathead Minnow	*Pimephales promelas*
Finescale Dace	*Phoxinus neogaeus*
Lake Chub	*Couesius plumbeus*
Mottled Sculpin	*Cottus bairdii*
Slimy Sculpin	*Cottus cognatus*
Spoonhead Sculpin	*Cottus ricei*
Mimic Shiner	*Notropis volucellus*
Blacknose Shiner	*Notropis heterolepis*
Emerald Shiner	*Notropis atherinoides*
Spottail Shiner	*Notropis hudsonius*
Northern Pearl Dace	*Margariscus margarita*
Longnose Dace	*Rhinichthys cataractae*
Trout-Perch	*Percopsis omiscomaycus*
White Sucker	*Catostomus commersonii*
Longnose Sucker	*Catostomus*
Shorthead Redhorse	*Moxostoma macrolepidotum*
Silver Redhorse[(b)]	*Moxostoma anisurum*
Iowa Darter	*Etheostoma exile*
Johnny Darter	*Etheostoma nigrum*
Logperch	*Percina caprodes*
Burbot	*Lota*
Sauger	*Sander canadensis*
Cisco (Lake Herring)	*Coregonus artedi*

Notes: Species are within the vicinity of the Project according to the Royal Ontario Museum Field Guide to Freshwater Fishes of Ontario (Holm et al., 2009).
(a) Species at Risk.
(b) Silver Redhorse is on border of Project region range.

15.2.1.2 Proposed Baseline Studies

Desktop Analysis

Numerous Indigenous/academic/NGO/governmental research studies have been conducted in the Attawapiskat River, Albany River and Muketei River watersheds and may provide a description of the existing fish habitat and fish community. A review of available reports, as well as range maps of Ontario fishes, will be conducted to identify fish community composition and other information relevant to existing fish and fish habitat. The desktop review will also include an analysis of satellite and other available imagery to determine watercourses crossings and potential fish and fish habitat within the region. A query of government databases will also be conducted during this stage, and relevant data sharing agreements will be completed, as required.

Field Studies

Aquatic investigations will be conducted to collect data on biophysical habitat conditions and sensitivity, spawning habitat, SAR, surface water quality and fish community present. Field studies are already underway, and these current and future studies include:

- Fish habitat assessment (commenced in 2021 and ongoing);
- Environmental DNA (eDNA) sampling will be conducted to characterize fish community and/or augment conventional fish capture (commenced in 2021 and ongoing);
- Conventional fish capture may be conducted in select waterbodies using some or all of the following fish capture methods including hoop nets, angling, seine nets, minnow traps or backpack electrofishing (commenced in 2021 and ongoing); and
- Opportunistic benthic sampling using eDNA and conventional sampling methods (commenced in 2021 and ongoing).

Protocols such as the Ontario Stream Assessment Protocol and methods outlined in the Ontario Benthos Biomonitoring Network (OBBN) will be utilized to collect field data, including data on fish habitat.

eDNA sampling will be conducted to characterize fish community and/or augment conventional fish capture. Sample collection and analysis will be based on federal Guidance on the Use of Targeted eDNA Analysis for the Management of Aquatic Invasive Species and SAR (Abbott et al., 2021) and/or comparable guidance.

Conventional fish capture may be conducted in select waterbodies using some or all of the following fish capture methods including hoop nets, angling, seine nets, minnow traps or backpack electrofishing. Fish will be identified to species and released back to the waterbody from which they were captured. Fish capture will be conducted under a License to Collect Fish for Scientific Purposes issued by MNRF under the provincial *Fish and Wildlife Conservation Act*. Opportunistic benthic macroinvertebrate sampling is proposed at select waterbody locations using eDNA sampling and/or conventional sampling in accordance with provincial guidance (i.e., OBBN) where feasible.

Field data collection for fish and fish habitat commenced in 2021 and are ongoing. Data will be collected using digital tablet-based software (i.e., Collector 123) which will enable location marking and photograph geo-reference tagging.

15.2.2 Wildlife and Wildlife Habitat

15.2.2.1 Preliminary Baseline Description

Forty-one mammal species may occur in the vicinity of the Project based on data presented in Dobbyn (1994). Species known or likely present include Shrews (*Sorex* spp.), Snowshoe Hare (*Lepus americanus*), a variety of rodents including furbearers such as Beaver (*Castor canadensis*) and Muskrat (*Ondatra zibethicus*), mustelids such as American Marten (*Martes americana*), Fisher (*Pekania pennanti*), and Wolverine

(*Gulo gulo*), and larger carnivores such as Lynx (*Lynx canadensis*), Gray Wolf (*Canis lupus*) and Black Bear (*Ursus americanus*). Ungulate species are expected to be limited to Moose and Caribou, both of which are important traditional food sources for Indigenous groups (Anonymous, 2009).

Five bat species may occur in the vicinity of the Project. These species include Big Brown Bat (*Eptesicus fuscus*) Silver-haired Bat (*Lasionycteris noctivagans*), Hoary Bat (*Lasiurus cinereus*), Little Brown Myotis (*Myotis lucifugus*) and Northern Myotis (*Myotis septentrionalis*). Two bat Significant Wildlife Habitat (SWH) types are recognized for Ecoregion 3W, which include maternity colonies or maternity roosting habitat and hibernacula (MNRF, 2017a). The project straddles the border of the Hudson Bay Lowlands and Ontario Shield Ecozones. The project is also contained entirely within the James Bay and Big Trout Lake Ecoregions (2E and 2W) as shown in **Figure 15-4**. Technically there are no SWH schedules for Ecoregion 2E or 2W, however, the SWH guidelines apply across the province and SWH identified in adjacent Ecoregions can be used as a proxy until these are developed.

Wildlife tracking surveys were conducted in 2011 and 2012 at three general locations along the proposed all-season road and one location around the Eagle's Nest Mine site (Knight Piésold Consulting, 2013). The surveys resulted in detection of 16 mammal species, the most abundant of which included America Marten, Snowshoe Hare, Fisher, Moose, Gray Wolf, and Red Fox (*Vulpes vulpes*). Wolverine was also recorded during the surveys.

Wildlife surveys were conducted in 2017 in the vicinity of the WSR project, located to the northwest of the Project. These surveys are reported in the 'Baseline Environmental and Geotechnical Studies: TPA1A Nibinamik-Webequie Community Road, TPA1B Webequie Community Supply Road' (SNC-Lavalin, 2018). Similar wildlife surveys that overlap with the Project's proposed corridors were conducted by AECOM (2020b), Zoetica (2019), and Golder (2013b). The AECOM, Zoetica, and Golder studies found the same wildlife species that were identified in the WSR study areas, plus a number of additional species. Mammals detected in these studies totaled 14 species as presented in **Table 15-2**. Additional small mammal species (e.g., mice, voles) are likely also present in the vicinity of the Project.

Table 15-2: Mammals Recorded During Wildlife Surveys in the Vicinity of the Project

Common Name	Scientific Name
American Marten	*Martes americana*
American Mink	*Neovison vison*
Beaver	*Castor canadensis*
Moose	*Alces americanus*
Gray Wolf	*Canis lupus*
Red Fox	*Vulpes*
Red Squirrel	*Tamiasciurus hudsonicus*
Snowshoe Hare	*Lepus americanus*
Weasel sp.	*Mustela* sp.
Caribou (Boreal population)	*Rangifer tarandus caribou*
Fisher	*Pekania pennanti*
North American River Otter	*Lontra canadensis*
Canada Lynx	*Lynx canadensis*
White-tailed Deer	*Odocoileus virginianus*

500,000
550,000
5,850,000
5,800,000
5,750,000
N
Webequie
First Nation
McFaulds
Lake
Big Trout Lake
Ecoregion
James Bay
Ecoregion
Otoskwin-Attawapiskat
River Provincial Park
Attawapiskat
Lake
Attawapiskat River
Marten Falls
First Nation
Albany River

Legend:

Corridor Alternatives
- A1
- A2
- B1
- C1
- C2
- C3
- D1
- D2
- D3
- E1
- F1
- F2

- Ecoregion
- Hudson Bay Lowlands
- Ontario Shield
- First Nation Reserve
- Waterbody
- Provincial Park

30 15 0 Km

SCALE: 1:550,000

Northern Road Link

Ecoregions and Ecozones

Figure Number:	REV:
15-4	PA

Client:	Project Number:	Date:
Marten Falls and Webequie First Nations	679878	2023-01-31

DSC	DRN	CHK	APP
	AD	ND	ND

NOTES

1. Coordinate System: NAD 1983 CSRS UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences Sector Centre for Topographic Information; and, Land Information Ontario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), Ontario Ministry of Natural Resources and Forestry (OMNRF) Download Date : 2021-02-04

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15.2.2.2 Proposed Baseline Studies

Desktop Analysis

Numerous Indigenous academic/NGO/governmental research studies have been conducted in the vicinity of the Project. These studies provide data on the existing wildlife and wildlife habitat in the region. A review of available reports, information on publicly available databases as well as information from ongoing studies such as the MFCAR and WSR studies will be conducted to identify the wildlife and wildlife habitat within the region. A literature review will also be completed during the desktop survey that will assess the effects of similar projects and developments on wildlife and wildlife habitat.

The desktop analysis will include a habitat classification exercise based on interpretation of satellite imagery and other available datasets to determine potential vegetation communities and natural features (and as a result, potential wildlife habitat) in the vicinity of the Project. For that program, original source data will be taken from the most recent Land Information Ontario (LIO) Wetland, Watercourse/Waterbody dataset, and the Far North Land Cover files. Digital satellite imagery will be sourced from the ArcGIS base maps. The Wildlife Habitat Technical Guide (MNR, 2000) will be used to define SWH based on the results of the habitat classification. The project straddles the border of the Hudson Bay Lowlands and Ontario Shield Ecozones. The project is also contained entirely within the James Bay and Big Trout Lake Ecoregions (**Figure 15-4**). Ecoregions 2E and 2W have no Ecological Criteria Schedule that exists at this time. However, existing schedules in other Ecoregions (3W and 3E) will be used along with the Technical Guide to classify habitat.

A query of government databases will also be conducted during this stage, including queries that may require sensitive data use agreements. Sensitive data use agreements will be completed as required. The desktop analysis will commence in 2022, and the results will be reported in a baseline report appended to the EAR/IS. Preliminary results from the desktop will also be reported in a wildlife and wildlife habitat study plan for the Project and will assist with the design of field programs.

Field Studies

To gather the information required to support the EA/IA for the Project, the following field surveys have been proposed:

- Bat Hibernacula and Maternity Roost Screening (MNR, 2011; to begin in 2022);
- SWH Field Classification (Verification of Desktop Results, ongoing);
- Winter Aerial Distribution Surveys (to begin in 2022);
- eDNA collection (watercourses and waterbodies, ongoing);
- Opportunist observations of terrestrial wildlife (ongoing); and
- Acoustic Surveys (bats and vocalizing anurans, ongoing).

Table 15-3 provides a summary of data collection methods and applicability. Surveys began in 2021 and will continue until at least 2023. Detailed methods for all these surveys will be presented in the wildlife and wildlife habitat study plan being developed for this project. Additional surveys may be initiated as a result of consultation with provincial or federal regulators.

Table 15-3: Summary of Data Collection

Species	Data Collection Methods	Data Applicability
Moose	› Indigenous Consultation; › Incidental field observations; › MNRF Moose habitat mapping; › MNRF Moose survey and Moose harvest data; › Winter Aerial Distribution Surveys; and › Secondary sources review.	› social value; › life cycle; › habitat requirements; › seasonal habitat use; › migration and movements; › relative abundance and population status; › winter distribution and location; and › sensitive periods (e.g., seasonal, diurnal and nocturnal).
Furbearers: American Marten River Otter Snowshoe Hare Beaver Muskrat Wolf	› Indigenous Consultation; › Incidental field observations; › MNRF Trapping harvest data; › Winter Aerial Distribution Surveys; and › Secondary sources review.	› social value; › life cycle; › habitat requirements; › location; › relative abundance and population status; › migration and movements; › sensitive periods (e.g., seasonal, diurnal and nocturnal); › winter distribution and location; and › seasonal ranges (spring, summer and fall).
Bats	› Indigenous Consultation; › Aerial reconnaissance; › Acoustic surveys (acoustic surveys for bats will be conducted according to the methodology outlined in the MNRF Guidance Document Bat Survey Protocol for Treed Habitats [MNRF, 2017b]); › Field Bat Hibernacula and Maternity Roost Surveys (MNR, 2011); › Abandoned Mine Information System (MNRF, 2022a); › Nearby study (WSR and MFCAR) data, pending data sharing agreements; and › Incidental Observations Secondary sources review.	› social value; › habitat requirements; › relative abundance and population status; › distribution and location; › seasonal ranges (spring, summer and fall); › life cycle; and › sensitive periods (e.g., seasonal, diurnal and nocturnal).
Frogs Toads Salamanders and Newts	› Indigenous Consultation; › ARU surveys (calling amphibians); › eDNA surveys; › Incidental observations during vegetation community and wetlands assessment studies; and › Secondary sources review.	› social value; › species diversity and richness; › distribution and location; › seasonal ranges (spring, summer and fall); › sensitive periods (e.g., seasonal, diurnal and nocturnal); › habitat requirements; › life cycle; › population status; and › sensitive periods (e.g., seasonal, diurnal and nocturnal).
Black Bear	› Indigenous Consultation; › Secondary sources review; and › Incidental observations.	› social value; › seasonal ranges (spring, summer and fall); › sensitive periods (e.g., seasonal, diurnal and nocturnal); › life cycle; › population status; › seasonal ranges; and › den distribution.

15.2.3 Birds and Bird Habitat

15.2.3.1 Preliminary Baseline Description

A review of secondary sources indicates that at least 130 bird species occur within the corridor alternatives for the Project. Surveys conducted in 2018 by Zoetica (Zoetica, 2019) detected 73 breeding species including Canada Warbler (*Cardellina canadensis*), Eastern Wood-Pewee (*Contopus virens*), Olive-sided Flycatcher (*Contopus cooperi*) and Rusty Blackbird (*Euphagus carolinus)*. In 2019, surveys completed by AECOM (2020b) detected 56 species, including Common Nighthawk (*Chordeiles minor*), Olive-sided Flycatcher, and Rusty Blackbird. Bald Eagle (*Haliaeetus leucocephalus*) was observed incidentally.

Waterfowl stopover and staging SWH consists of water bodies used for migration, including ponds, marshes, lakes, bays, and coastal inlets (MNRF, 2017a). Local species aggregations of Ruddy Ducks, Canvasbacks, Trumpeter Swans or Tundra Swans may be considered significant and occur within the vicinity of the Project Some of the species that were observed during 2021 waterfowl surveys include: Canada Goose (*Branta canadensis*), Tundra Swan (*Cygnus columbianus*), Mallard (*Anas platyrhynchos*), Green-winged Teal (*Anas carolinensis*), Lesser Scaup (*Aythya affinis*), Ring-necked Duck (*Aythya collaris*), Bufflehead (*Bucephala albeola*), Common Goldeneye (*Bucephala clangula*), Common Merganser (*Mergus merganser*), Red-breasted Merganser (*Mergus serrator*), and Hooded Merganser (*Lophodytes cucullatus*). Common Goldeneye and Common Merganser were the most widely observed of the numerous waterfowl species observed.

15.2.3.2 Proposed Baseline Studies

Desktop Analysis

Numerous Indigenous/academic/NGO/governmental research studies have been conducted in the vicinity of the Project. These studies provide data on the existing wildlife and wildlife habitat in the region. A review of available reports, information on publicly available databases as well as information from ongoing studies such as the MFCAR and WSR studies (pending data sharing agreements) will be conducted to identify the bird and bird habitat within the region. A literature review will also be completed during the desktop survey that will assess the effects of similar projects and developments on birds and bird habitat.

The desktop analysis will include a habitat classification exercise based on interpretation of satellite imagery and other available datasets to determine potential vegetation communities and natural features (and as a result, potential bird habitat) in the vicinity of the Project. For that program, original source data will be taken from the most recent LIO Wetland, Watercourse/Waterbody dataset, and the Far North Land Cover files. Digital satellite imagery will be sourced from the ArcGIS base maps. The Significant Wildlife Habitat Technical Guide (MNR, 2000) will be used to define SWH based on the results of the habitat classification. The project straddles the border of the Hudson Bay Lowlands and Ontario Shield Ecozones. The project is also contained entirely within the James Bay and Big Trout Lake Ecoregions (**Figure 15-4**). Ecoregions 2E and 2W have no Ecological Criteria Schedule exists at this time. However, existing schedules in other Ecoregions (3W and 3E) will be used along with the Technical Guide to classify habitat.

A query of government databases will also be conducted during this stage, including queries that may require sensitive data use agreements will be completed, as required. The desktop analysis will commence in 2022, and the results will be reported in a baseline report appended to the EAR/IS. Preliminary results from the desktop will also be reported in a birds and bird habitat study plan for the Project and will assist with the design of field programs.

Field Studies

The primary purpose of the avian field program will be to characterize and describe the existing bird community and their habitats that are found or are likely to be found in the in the vicinity of the Project. Data collected through field studies will be sufficient to fulfill the basic requirements of the EA/IA. Surveys began in 2021 and are ongoing. Detailed methods for all these surveys will be presented in a birds and bird habitat study plan being developed for the Project. Additional surveys may be initiated as a result of consultation with provincial or federal regulators.

The following field surveys are proposed:

- Breeding Bird Point Count Survey (conducted in accordance with Instructions for Point Counts [Ontario Breeding Bird Atlas, 2021; Konze and McLaren, 1997], conducted in June 2021 and ongoing);
- Acoustic Bird Surveys using ARUs (conducted in accordance with Instructions for Point Counts [Ontario Breeding Bird Atlas, 2021], ARUs deployed, and data collected spring, summer, fall and winter over a 2-year period, ongoing);
- Comparative ARU and Point Count Surveys (ongoing);
- SWH Field Classification (verification of Desktop Results, ongoing);
- Waterfowl Migration Aerial Surveys targeting waterfowl migration routes and waterfowl staging areas (conducted in accordance with United States Fish and Wildlife Service and Canadian Wildlife Service standards [USFWS and CWS, 1987], British Columbia Ministry of Environment, Lands and Parks [1999] standards, and Ducks Unlimited Canada [2003] protocols, spring and fall and over a two-year period, ongoing); and
- Raptor Nesting Data Collection (collected incidentally during aerial and other surveys, ongoing).

15.2.4 Plants and Vegetation Communities

15.2.4.1 Preliminary Baseline Description

The Project is located within the James Bay and Big Trout Lake Ecoregion (Ecoregion 2E and 2W, respectively). Treed and open fen (22.3% and 7.3%) and treed and open bog (21.2% and 17.7%) comprise the primary vegetation associations in the James Bay Ecoregion. Coniferous forest is the predominant forest class (12.6%) followed by sparse forest (7.6%). Open water covers 5.6% of the Ecoregion. This Ecoregion notably includes the most extensive treed fens in the ecozone and in Ontario (Crins et al., 2009).

Black Spruce dominates both upland and lowland sites, with Jack Pine and White Birch and Poplar species as associates. The shrub layers tend to be dominated by ericaceous shrubs, willow, and Alder. The ground cover primarily consists of mosses and lichens, low ericaceous shrubs, and some herbs. Bedrock exposures have fewer trees and greater lichen cover. Closed to open stands of stunted Black Spruce, with ericaceous shrubs and a ground cover of sphagnum moss, dominate poorly drained peat-filled depressions. These peat-filled depressions, typically made up of decaying sphagnum moss species are common in the James Bay Ecoregion and make up a part of the largest contiguous patches of peatland in Canada. These peatlands are also responsible for storing significant amounts of organic carbon, (approximately 56% of all stored carbon in Canadian soils) while only occupying 12% of the Canadian landscape (Tarnocai, 2006). As such, they are important carbon sinks in the environment and are important for offsetting the effects of climate change. Peatlands are also important in maintaining water quality and preventing and mitigating floods.

From the review of available information sources, the following is a general description of the vegetation communities in the James Bay Ecoregion and in the vicinity of the Project. Vegetation has been grouped according to the Far North Land Cover Classification system.

Coniferous Treed

The dominant canopy species are Black Spruce or Jack Pine. Jack Pine dominated sites often had strong regeneration of Black Spruce in the understorey, likely reflective of previous fire events. Balsam Poplar and Trembling Aspen were also present at some sites as smaller components of the canopy. Tall shrub growth is typically sparse, consisting of Alder species when present. Low shrub growth was variable, dominated commonly by Labrador Tea (*Rhododendron groenlandicum*), with other common species including Leatherleaf (*Chamaedaphne calyculata*) and Bunchberry (*Cornus canadensis*). Moss cover is variable, though generally more prevalent at Black Spruce sites. Feathermoss species is the most common component, frequently dominating sites. Peat-forming sphagnum species are occasionally found in depressions at wetter sites. Lichens are present at most sites, principally Reindeer Lichen (*Cladina rangiferina*) and Coral Lichen (*Cladina stellaris*).

Mixed Treed

Tree species are Black Spruce, Jack Pine, Trembling Aspen, Balsam Poplar, White Birch and Tamarack (*Larix laricina*). Tall shrubs are present, usually mixed with subcanopy trees, and consist mainly of Green Alder (*Alnus viridis*) and Speckled Alder (*Alnus incana*), with occasional willow species (*Salix* spp.). Low shrub growth is fairly sparse, with Labrador Tea, Prickly Rose (*Rosa acicularis*), Bunchberry, and Velvet Leaf Blueberry (*Vaccinum myrtilloides*) being the most common species. Moss cover is sparse at most sites, with Feathermosses the most consistently present; other moss species, including Ground Cedar (*Lycopodium complanatum*) and Ground Pine (*Lycopodium obscurum*), present in lower abundances.

Deciduous Treed

Dominant canopy species are Balsam Poplar and Trembling Aspen, with Jack Pine. Subcanopy growth is variable, consisting mainly of poplar species, along with White Birch. Black Spruce also present in subcanopy. Tall shrub growth is variable, consisting of mostly Alder with some willow. Common low shrubs included Prickly Rose, Velvet Leaf Blueberry and Bunchberry, with Labrador Tea also present. Moss cover is sparse at most sites. Other moss species include Ground Pine and Ground Cedar, as well as Club Moss species.

Esker Vegetation Communities

Vegetation communities located along the esker feature within and adjacent to the proposed project corridors generally consist of the non-wetland communities (mixed treed, deciduous treed, and coniferous treed) as described above. Canopy composition in these areas is dominated by Black Spruce, Trembling Aspen, White Birch, with smaller contributions from Jack Pine, Balsam Fir, Balsam Popular and Tamarack, frequently in discrete enclaves. Elevation on the esker communities tends to be higher, and slopes are steeper allowing for vegetation more tolerant of well-drained soils. The presence of granular and mineral substrates results in better drained and more nutrient rich soils, leading to larger trees compared to other upland and wetland locations. Another result of this is generally increased plant diversity, and these communities are frequently home to orchids and a wider variety of wildflowers and fruit bearing shrubs. Deadfall/blowdown of mature trees is also a notable feature of these communities either as a result of fire or wind damage.

Coniferous Swamp

Black Spruce is the dominant canopy species, and usually dominated subcanopy layers as well. Tamarack is present as a canopy species. Tall shrub growth is sparse and typically restricted to Speckled Alder. Low shrub growth is variable, but quite dense at some sites. Labrador Tea is the most common species. Leatherleaf and Dwarf Birch (*Betula glandulosa*) are also present at wetter sites. Moss coverage is near complete at all sites. Peat-forming sphagnum species are generally dominant, with Feathermosses also present and, in some cases, codominant.

Sparse Treed Fen

Tamarack is the primary tree species, with Black Spruce also present. Tall shrubs are also sparse, typically consisting of willow species where present. Low shrubs included Dwarf Birch, Leatherleaf, Bog Rosemary (*Andromeda polifolia*), and occasionally Red Osier Dogwood (*Cornus stolonifera*). Ground cover is a combination of peat-forming – sphagnum mosses and herbaceous growth consisting of grass and sedge species, with most sites having primarily herbaceous cover.

Open Fen

Trees are rare, consisting of Tamarack or, more rarely, Black Spruce, usually less than 2 m tall. Tall shrubs, where present, consist of Speckled Alder and willow species. Low shrubs present include Leatherleaf, Dwarf Birch, and Bog Rosemary. Ground cover is dominated by grass and sedge species.

Rare Plant Species and Communities

Based on previous work around the Eagle's Nest Project (Knight Piésold Consulting, 2013), a list of rare plant species and plant communities was generated for the region from their contact with the MNRF. However, none of the plants identified in the list were observed in 2017 (MFFN, 2017). Based on the timing of the surveys, the presence of these species will be reassessed as part of the additional field surveys to be completed to support the Project's EA/IA. The proponent will contact the MNRF for a list of rare plants potentially in the area during the EA/IA. Known plant species of cultural value or significance to Indigenous communities include:

- Wild berries or nuts (Blueberry, Wild Strawberry, Gooseberry/Currant, Raspberry);
- Wild plants (Labrador Tea Leaves, Muskrat Root, Wild Rice, Mint Leaves, and Dandelions); and
- Tree Foods (Cedar Tea, Maple Syrup, and Poplar Inner Bark).

15.2.4.2 Proposed Baseline Studies

Desktop Analysis

Numerous Indigenous/academic/NGO/governmental research studies have been conducted in the vicinity of the Project. These studies provide data on the existing plant and vegetation communities habitat in the region. A review of available reports, information on publicly available databases as well as information from ongoing studies such as the MFCAR and WSR studies (pending data sharing agreements) will be conducted to identify the plants and vegetation communities within the region.

The desktop analysis will include a habitat classification exercise based on interpretation of satellite imagery and other available datasets to determine potential vegetation communities and natural features (and as a result, potential bird habitat) in the vicinity of the Project. For that program, original source data will be taken from the most recent LIO Wetland, Watercourse/Waterbody dataset, and the Far North Land Cover files. Digital satellite imagery will be sourced from the ArcGIS base maps.

The Wildlife Habitat Technical Guide (MNR, 2000) will be used to define SWH, and the plants and vegetation communities study will describe the vegetation communities that make up the criteria in this document. The Project occurs within Ecoregion 2E and 2W for which no Ecological Criteria Schedule exists at this time. However, existing schedules in other Ecoregions (3W and 3E) will be used along with the Technical Guide to classify habitat. The desktop analysis will include an interpretation of satellite and other available imagery to determine potential vegetation communities in the vicinity of the Project. A query of government databases will also be conducted during this stage, including queries that may require sensitive data use agreements will be completed, as required. The desktop analysis will commence in 2022, and the results will be reported in a baseline report appended to the EAR/IS. Preliminary results from the desktop will also be reported in the Plants and Vegetation Communities Study Plan and assist with the design of field programs.

Field Studies

To gather the information required, vegetation surveys in accordance with provincial standards for Ecological Land Classification (ELC) will be used to identify and classify vegetative communities. ELC uses a hierarchical approach to identify recurring ecological patterns on the landscape to compartmentalize complex natural variation into a reasonable number of meaningful ecosystem units. This facilitates a comprehensive and consistent approach for ecosystem description, inventory and interpretation (Lee et al., 1998). The functional units from field assessments will follow the Ecosites of Ontario (Operational Draft) – Boreal Region (Banton et al., 2009), which is the current standard arising from the previous Forest Ecosystem and Wetland Ecosystem Classification systems for the Northeast and Northwest regions of the province (Harris, 1996; Racey et al., 1996; Sims et al., 1997; Taylor, 2000).

Vegetation surveys began in 2021 and are ongoing. Detailed methods for these surveys will be presented in the Plants and Vegetation Study Plan being developed for this project. Additional surveys may be initiated as a result of consultation with provincial or federal regulators.

Generally, the goal of the sample location selection will be to confirm/compare the classifications assigned from the publicly available datasets. The survey plan will consider multiple survey locations in each vegetation type to get an accurate representation of relative abundance and diversity. Transects and circular plots will be completed as part of the field work when assessing vegetation communities. This will allow for the capture of species presence and transition zone dynamics. When possible, vegetation team members will also accompany the aquatic and wildlife/SAR teams to characterize vegetation on those study areas to support their work and characterize wildlife habitat.

15.2.5 Species at Risk

15.2.5.1 Preliminary Baseline Description

A number of Species at Risk (SAR) have been previously observed within the vicinity of the Project in other studies, or their known range overlaps with the Project. A preliminary SAR screening was completed and identified a number of species that may occur within the vicinity of the Project (SNC-Lavalin, 2022). SAR known or potentially present in the vicinity of the Project, along with a description of each species, are summarized in **Table 15-4**.

Table 15-4: Species at Risk Known or Potentially Present in the Vicinity of the Project

Scientific Name	Common Name	ESA Status	SARA Status	Habitat Requirements	Habitat Exists in the Vicinity of the Project
Gulo gulo	Wolverine	THR	SC	Wolverines usually live alone and roam across large territories that vary from 500 km^2 to 1,500 km^2 or more. Females build dens under snow-covered boulders, fallen logs, and occasionally in snow drifts. Researchers are still learning about the ecology and habitat needs of the Wolverine in Ontario. A wide variety of forested and tundra habitats is used by wolverines in wilderness areas. Habitats must have an adequate year-round supply of food that consists of smaller prey species, such as rodents and Snowshoe Hares, used more in summer, and the carcasses of larger animals, like	Candidate habitat present, animals have been previously observed in the vicinity of the Project

Scientific Name	Common Name	ESA Status	SARA Status	Habitat Requirements	Habitat Exists in the Vicinity of the Project
				Moose and Caribou, which are an important part of the winter diet. Females den at higher elevations under rocks, logs or snow. The snow cover must persist late into the spring to insulate the den and food must be close at hand. Forestry, hydroelectric developments, oil and gas and mineral exploration and development, and transportation corridors continue to alter, remove or fragment habitats. About 6% of all current Wolverine range is within parks and protected areas.	
Myotis lucifugus	Little Brown Myotis	END	END	Bats are nocturnal. During the day they roost in trees and buildings. They often select attics, abandoned buildings, and barns for summer colonies where they can raise their young. Bats can squeeze through very tiny spaces (as small as 6 mm across) and this is how they access many roosting areas. Little Brown Bats hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing. Their specific physiological requirements limit the number of suitable sites for over-wintering. In the east, large numbers (i.e., >3,000 bats) of several species typically overwinter in relatively few hibernacula. In the west, there are fewer known hibernacula, and numbers appear lower per site. Females establish summer maternity colonies, often in buildings or large-diameter trees. Foraging occurs over water, along waterways and forest edges. Large open fields or clear cuts generally are avoided. In autumn, bats return to hibernacula, which may be hundreds of kilometres from their summering areas, swarm near the entrance, mate, and then enter that hibernaculum, or travel to different hibernacula to overwinter. Associated Ecological Land Classification (ELC) communities include: Coniferous Forest, Mixed Forest, Deciduous Forest, Coniferous Swamp, Mixed Swamp and Deciduous Swamp where suitable roosting (e.g., cavity trees and trees with loose bark) habitat is available.	Candidate Habitat Present

Scientific Name	Common Name	ESA Status	SARA Status	Habitat Requirements	Habitat Exists in the Vicinity of the Project
Myotis septentrionalis	Northern Myotis	END	END	Northern Myotis inhabit a variety of treed habitats, including boreal forests, choosing to roost within knot holes, under loose bark and in the cracks and cavities found within the bole, branches or trunks of trees. These bats hibernate from October or November to March or April. The Northern Myotis overwinters in cold and humid hibernacula (caves/mines). Their specific physiological requirements limit the number of suitable sites for over-wintering. In the eastern portion of the species range, large numbers (i.e., >3,000 bats) of several species typically overwinter in relatively few hibernacula. In the western part of the species range, there are fewer known hibernacula, and numbers appear lower per site. Females establish summer maternity colonies in buildings or large-diameter trees. Foraging occurs along waterways, forest edges and in gaps in the forest. Large open fields or clear cuts generally are avoided. In autumn, bats return to hibernacula, which may be hundreds of kilometres from their summering areas, swarm near the entrance, mate, and then enter that hibernaculum, or travel to different hibernacula to overwinter. Associated ELC communities include: Coniferous Forest, Mixed Forest, Deciduous Forest, Coniferous Swamp, Mixed. Swamp and Deciduous Swamp where suitable roosting (e.g., cavity trees and trees with loose bark) habitat is available.	Candidate Habitat Present
Perimyotis subflavus	Tri-coloured bat	END	END	In summer, Tri-coloured bats preferentially occupy mature forest stands that have with good availability of snags for roosting and foraging under a closed canopy. Females tend to roost alone in small colonies, often found in clumps of dead foliage and lichens. Males also tend to roost individually in similar habitats. Tri-coloured bats have the most rigid over-wintering habitat requirements, requiring the deepest parts of caves or mines where temperature is the least variable. They tend to use the same hibernacula as Little Brown Myotis and Northern Myotis, but relatively few individuals (<10) are typically recorded in any one hibernaculum. The species is thought to hibernate individually, a possible reason for discoveries in low numbers.	Candidate Habitat Present

Scientific Name	Common Name	ESA Status	SARA Status	Habitat Requirements	Habitat Exists in the Vicinity of the Project
Rangifer tarandus	Caribou (Boreal Population)	THR	THR	Caribou habitat in the boreal forest is constantly changing. Much of the forest is naturally in an unsuitable condition for caribou at any one time, but caribou need and use the entire landscape over time as habitat changes. Disturbances from fires, blowdown and insects can quickly change the amount and distribution of habitat. There is also great ecological variation in caribou habitat across the province ranging from upland fire-dependent forests in the northwest, to extensive lowland forests in the northeast where fire is much less frequent. At the broad landscape scale, caribou require large, undisturbed areas of old or mature conifer upland forest and lowlands dominated by Jack Pine and/or Black Spruce. These areas allow caribou to effectively separate themselves from higher densities of Moose, White-tailed Deer, Grey Wolves and Black Bears which tend to be associated with younger mixed or deciduous forest. At smaller scales, caribou seasonally select specific habitat features and areas that support successful reproduction and calf rearing, provide summer and/or winter forage, and/or facilitate movement between discrete areas of use. In winter, caribou tend to use mature and old growth coniferous forests wherever they occur. These forests are generally associated with marshes, bogs, lakes, rivers, and upland eskers. In summer, the caribou occasionally feed in young stands, after fire or logging. Many subpopulations of the Boreal Caribou population show a preference for peatlands; they generally avoid clear cuts, shrub-rich habitat and aspen-poplar dominated sites.	Candidate Habitat Present, animals have been previously observed in the vicinity of the Project

Scientific Name	Common Name	ESA Status	SARA Status	Habitat Requirements	Habitat Exists in the Vicinity of the Project
Rangifer tarandus (Cont'd)	Caribou (Eastern Migratory Population)	SC	SC	The Eastern Migratory population of caribou typically uses tundra and forest-tundra transitional areas along the Hudson Bay coast during the spring and summer periods, and they move south to boreal forest habitat in the fall and winter, although individuals can be found in all habitat types at all times of year. In Ontario, movement and habitat use of the Eastern Migratory caribou population is complex. During the spring calving season, male caribou are thought to remain in the forest and forest-tundra areas, while females move further north to the calving grounds. Following calving, the caribou form large, loosely knit groups containing both male and female animals of all ages. By late summer, the large herds separate into smaller groups, including pairs of female caribou and their calves. After spending approximately six months in the open tundra and forest-tundra transitional area near the coast, the caribou gradually move south and inland in the fall, reaching the most distant points from the coast in mid-winter before slowly returning to the coast the following spring.	Candidate Habitat Present
Haliaeetus leucocephalus	Bald Eagle	SC	No status	Prefer to nest in large trees, almost always near a major lake or river where they do most of their hunting.	Candidate habitat present, bird has been previously observed in the vicinity of the Project
Hirundo rustica	Barn Swallow	THR	THR	Prefer open habitat for foraging: grassy fields, pastures, ROWs, agriculture crops and wetlands. Post-European settlement: Nest in human structures, including barns, garages, houses, bridges, and culverts. Barn swallows generally re-use nests from year to year and are, therefore, sensitive to the removal of nesting structures.	Candidate Habitat Present although limited
Riparia riparia	Bank Swallow	THR	THR	Habitat includes nest sites, foraging areas, and nocturnal roost sites. Build nest burrows in eroding vertical banks, such as lakeshore bluffs, riverbanks, and banks or stockpiles created in aggregate pits and construction sites.	Candidate Habitat Present

Scientific Name	Common Name	ESA Status	SARA Status	Habitat Requirements	Habitat Exists in the Vicinity of the Project
Cardellina canadensis	Canada Warbler	SC	THR	Northern from conifer swamps to riparian woodlands. Nests are commonly found in cool, damp, mixed forests with dense shrub layers. Nests are built hidden among dense ferns, mosses, and fallen logs.	Yes, bird has been previously observed in the vicinity of the Project
Chaetura pelagica	Chimney Swift	THR	THR	Commonly found in urban areas near buildings; nests in hollow trees, crevices of rock cliffs, chimneys.	Candidate Habitat May be Present
Chliodonias niger	Black Tern	SC	No Status	Shallow freshwater marshes (> 20 ha.) with cattails and emergent vegetation interspersed with open water. Smaller wetlands with the same features also used.	No
Chordeiles minor	Common Nighthawk	SC	THR	Open ground; clearings in dense forests; peat bogs; plowed fields; gravel beaches or barren areas with rocky soils; open woodlands; flat gravel roofs.	Candidate Habitat Present, bird has been previously observed in the vicinity of the Project
Antrostomus vociferus	Eastern Whip-poor-will	THR	THR	Dry, open, deciduous woodlands of small to medium trees; oak or beech with lots of clearings and shaded leaflitter, wooded edges; pine plantations.	Candidate Habitat May be Present
Contopus virens	Eastern Wood-pewee	SC	THR	Mostly associated with the mid-canopy layer of forest clearings and edges of deciduous and mixed forests; preferred habitats are intermediate-age forest stands and mature stands with little understory vegetation.	Candidate Habitat Present, bird has been previously observed in the vicinity of the Project
Coccothraustes vespertinus	Evening Grosbeak	SC	SC	This breeds in secondary growth and mature mixed forests; however, habitat selection is likely influenced by food availability, rather than habitat structure. Presence is most likely based on the presence of Spruce Budworm, a primary food source for this species.	Candidate Habitat Present
Contopus cooperi	Olive-sided Flycatcher	SC	THR	Semi-open, conifer forest; prefers Spruce, Jack Pine, and Balsam Fir; near pond, lake, or river; treed wetlands for nesting; burns with dead trees for perching.	Candidate Habitat Present, bird has been previously observed in the vicinity of the Project
Falco peregrinus anatum/tundrius	Peregrine Falcon	SC	SC	Nests on cliff ledges or crevices, preferably 50 to 200 m in height, but sometimes on the ledges of tall buildings or bridges, always near good foraging areas.	No

Scientific Name	Common Name	ESA Status	SARA Status	Habitat Requirements	Habitat Exists in the Vicinity of the Project
Euphagus carolinus	Rusty Blackbird	SC	SC	Nests in the boreal forest; prefers shores of wetlands, peat bogs, swamps, and beaver ponds.	Candidate Habitat Present, bird has been previously observed in the vicinity of the Project
Asio flammeus	Short-eared Owl	SC	SC	Resides in open habitats, including arctic tundra, grasslands, peat bogs, marshes, sand-sage concentrations and old pastures. Preferred nesting sites are dense grasslands, as well as tundra with areas of small willows.	No
Coturnicops noveboracensis	Yellow Rail	SC	SC	Large, freshwater or brackish grass and sedge marshes with dense vegetation, including bullrushes, horsetails and grasses.	Candidate Habitat Present
Acipenser fulvescens	Lake Sturgeon	SC	SC	The Lake Sturgeon lives almost exclusively in freshwater lakes and rivers with soft bottoms of mud, sand or gravel. They are usually found at depths of 5 m to 20 m. They spawn in relatively shallow, fast-flowing water (usually below waterfalls, rapids, or dams) with gravel and boulders at the bottom. However, they will spawn in deeper water where habitat is available. They also are known to spawn on open shoals in large rivers with strong currents. The species occupies a wide variety of aquatic ecosystem types (e.g., stepped-gradient Boreal Shield rivers, low gradient meandering Prairie rivers, low gradient Hudson lowland rivers, Great Lakes and associated tributaries). Lake Sturgeon requires a variety of habitats to complete its lifecycle, and the species has evolved to exploit typical upstream to downstream hydraulic and substrate gradients. Hatch is contingent on aeration by flowing water, after which larvae apparently require gravel substrate in which to bury and remain while development continues. Once the yolk sac is absorbed, larvae drift downstream via water currents. Habitat requirements at the age-0 stage are not well understood but may not be as strict as previously assumed. Aside from the requirement of adequate benthic prey items, the habitat requirements for middle to later life stages (juveniles and adults) are not particularly narrow. Habitat trends vary across the species' range. In some areas, the construction of dams has ceased but, in	Candidate habitat present

Scientific Name	Common Name	ESA Status	SARA Status	Habitat Requirements	Habitat Exists in the Vicinity of the Project
				other areas, it is expected to continue into the foreseeable future. Sediment and water quality has improved in many areas formerly affected by pollution from the pulp-and-paper industry. Large lakes/rivers > 20 m deep with soft mud, sand or gravel bottoms required.	

SC = Special Concern, THR = Threatened, END = Endangered

15.2.5.2 Proposed Baseline Studies

Desktop Analysis

Numerous Indigenous/academic/NGO/governmental research studies, such as those mentioned above, have been conducted in the vicinity of the Project. These studies provide data on the existing SAR and their habitat in the region. A review of available reports, information on publicly available databases as well as information from ongoing studies such as the MFCAR and WSR studies (pending data sharing agreements) will be conducted to identify the SAR, and their habitat within the region within the region. A gap analysis of SAR data will be completed as part of the desktop analysis to determine where additional baseline data collection may be required. A literature review will also be completed during the desktop survey that will assess the effects of similar projects and developments on SAR.

The desktop analysis will include a habitat classification exercise based on interpretation of satellite imagery and other available datasets to determine potential vegetation communities and natural features (and as a result, potential SAR habitat) in the vicinity of the Project. For that program, original source data will be taken from the most recent LIO Wetland, Watercourse/Waterbody dataset, and the Far North Land Cover files. Digital satellite imagery will be sourced from the ArcGIS base maps. The Wildlife Habitat Technical Guide (MNR, 2000) will be used to define SWH based on the results of the habitat classification. The project straddles the border of the Hudson Bay Lowlands and Ontario Shield Ecozones. The Project is also contained entirely within the James Bay and Big Trout Lake Ecoregions (**Figure 15-4**). Ecoregions 2E and 2W have no Ecological Criteria Schedule exists at this time. However, existing schedules in other Ecoregions (3W and 3E) will be used along with the Technical Guide to classify habitat.

A query of government databases will also be conducted during this stage, including queries that may require sensitive data use agreements will be completed, as required. The desktop analysis will commence in 2022, and the results will be reported in a baseline study included with the EAR/IS. Preliminary results from the desktop will also be reported in a SAR Study Plan for the Project and will assist with the design of field programs.

Field Studies

Many of the field studies described in **Sections 15.2.1, 15.2.2, 15.2.3** and **15.2.4** will obtain SAR data as a result of their field programs. Point counts and acoustic surveys for both birds and bats will capture bird SAR data as well, as ARUs will be deployed in locations and at times where bird SAR may be found. For example, ARUs will be scheduled to record in esker habitat during times when Common Nighthawk and Eastern whip-poor-will (*Antrostomus vociferus*) are likely to be active (Knight et al., 2019). SAR bird species identified during field studies, especially during breeding season will be presumed to be nesting/breeding in the area. Aerial Distribution surveys will capture mammal data, including caribou and Wolverine data.

Surveys began in 2021 and are ongoing. Detailed methods for all these surveys will be presented in a SAR Study Plan being developed for the Project. Targeted SAR field programs will also take place if suitable habitat is identified in the desktop or field studies. To gather the information required to support the EA/IA, the following field surveys have been proposed that exclusively target SAR:

- Winter Aerial Distribution Surveys;
- Field Collaring Programs (Caribou);
- SWH Field Classification (Verification of Desktop Results, ongoing);
- Acoustic Bird Surveys using ARUs in locations where SAR may be found (ARUs deployed and data collected spring, summer, fall and winter over a 2-year period, ongoing);
- Hair Snag and Camera Trap Surveys (Wolverine); and
- Opportunist observations of SAR (ongoing).

Table 15-5 provides a summary of data collection methods and applicability. Some surveys began in 2021, while others will begin in subsequent years. Surveys will likely continue for several years, and effort will be based on consultation with provincial and federal regulators. Additional studies may be initiated as a result of consultation with provincial or federal regulators.

Table 15-5: Summary of Data Collection – Species at Risk

Species	Data Collection Methods	Data Applicability
Caribou	› Indigenous Consultation; › Trapper Interviews and Harvest Records; › Incidental field observations; › MNRF Caribou Collaring data (subject to licensing agreement); › MECP General Habitat Descriptions (Missisa and Ozhiski Range); › Nearby study (WSR and MFCAR) data, pending data sharing agreements; › Secondary sources review; › Field Collaring Program; and › Winter Aerial Distribution Surveys.	› Social value; › Life cycle; › Habitat requirements; › Seasonal habitat use; › Migration and movements; › Relative abundance and population status; › Winter distribution and location; and › Sensitive periods (e.g., seasonal, diurnal and nocturnal).
Wolverine	› Indigenous Consultation; › Trapper Interviews and Harvest Records; › Nearby study (WSR and MFCAR) data, pending data sharing agreements; › Incidental field observations; › Hair Snag (DNA) and Camera Trap Surveys; and › Winter Aerial Distribution Surveys.	› Social value; › Life cycle; › Habitat requirements; › Seasonal habitat use; › Migration and movements; › Relative abundance and population status; › Winter distribution and location; and › Sensitive periods (e.g., seasonal, diurnal and nocturnal).

Species	Data Collection Methods	Data Applicability
Bat SAR (Little Brown Myotis, Northern Myotis, Tri-Coloured Bat)	› Indigenous Consultation; › Aerial reconnaissance; › Acoustic surveys (Acoustic surveys for bats will be conducted according to the methodology outlined in the MNRF Guidance Document Bat Survey Protocol for Treed Habitats [MNRF, 2017b]); › Nearby study (WSR and MFCAR) data, pending data sharing agreements; › Field Bat Hibernacula and Maternity Roost Surveys (MNR, 2011); › Abandoned Mine Information System (MNRF, 2022a); and › Secondary sources review.	› Social value; › Habitat requirements; › Relative abundance and population status; › Distribution and location; › Seasonal ranges (spring, summer and fall); › Life cycle; and › Sensitive periods (e.g., seasonal, diurnal and nocturnal).
Bird SAR	› Indigenous Consultation; › Trapper Interviews and Harvest Records; › Nearby study (WSR and MFCAR) data, pending data sharing agreements; › Incidental field observations; › Breeding Bird Point Count Surveys; and › Acoustic Recording Unit Surveys.	› Social value; › Habitat requirements; › Relative abundance and population status; › Distribution and location; › Seasonal ranges (spring, summer and fall); › Life cycle; and › Sensitive periods (e.g., seasonal, diurnal and nocturnal).

16 Description of the Health, Socio-economic, Cultural Heritage Resources, and Aboriginal and Treaty Rights and Interests Context

This section provides a brief description of human health, socio-economic, cultural heritage resources, and Aboriginal and Treaty Rights and Interests context in the region where the Project is located, based on information that is available to the public and/or derived from the consultation and engagement undertaken to date.

16.1 Human Health Context

16.1.1 Preliminary Baseline Description

The human health baseline will draw on baseline information from other components of the environment that may influence human health such as noise, air quality, surface water, geology, terrain and soils, as well as knowledge gathered with respect to country foods and community diet. Given that the Project is located in a remote area that is difficult to access, and currently has no significant point or mobile sources of air, water, or soil contamination, baseline conditions for the components of the environment that may influence human health would be expected to indicate negligible potential exposures.

In addition, the IA will focus on cultural continuity and well-being in the context of Aboriginal and Treaty Rights and Interests. The IK collection program will be led by participating Indigenous communities and information provided may include perspectives relevant to the human health baseline.

Current dietary patterns in the Project area suggest that many local community members have mixed diets that combine a variety of locally harvested country food items with store-bought food items. The only known available information on Indigenous community dietary patterns is the Ontario First Nations Food, Nutrition and Environmental Study (FNFNES) (Chan et al., 2014), which was conducted in 2011-2012 among 18 First Nations communities in Ontario including Attawapiskat First Nation, Fort Albany First Nation, Kingfisher Lake First Nation, Kitchenuhmaykoosib Inninuwug First Nation, MFFN and WFN. This study indicated that current diets are a mix of traditional country food items and market (store-bought) food items. As part of the IK collection program, Indigenous communities will be consulted for further information on dietary patterns.

16.1.2 Proposed Baseline Studies

Desktop Analysis

A desktop analysis of existing information sources will be completed to compile existing data and identify information gaps that will need to be addressed through further study including potentially primary data collection activities.

Primary and Secondary Data Collection

Primary data collection activities are anticipated to include efforts to solicit information on activity patterns and particularly country food harvesting and consumption patterns through the IK Program and consultation and engagement activities.

If the problem formulation step of the Human Health Risk Assessment (which is the initial component of the overall human health assessment) identifies that an assessment of country food consumption is required, a country foods tissue sampling program will be developed to generate primary data on potential Project-related contaminant levels in country foods. This program will involve working with Indigenous communities to collect appropriate tissue samples from commonly harvested country food items.

16.2 Socio-economic Context

The following communities are in close proximity to the Project and therefore more likely to be both positively and negatively affected by it:

- Webequie First Nation;
- Marten Falls First Nation;
- Neskantaga First Nation;
- Nibinamik First Nation; and
- Eabametoong First Nation.

The following communities and municipalities are in the broader area surrounding the Project:

- Indigenous communities:
  - Animbiigoo-Zaagi'igan Anishinaabek;
  - Aroland First Nation;
  - Attawapiskat First Nation;
  - Constance Lake First Nation;
  - Fort Albany First Nation;
  - Ginoogaming First Nation;
  - Kasabonika Lake First Nation;
  - Kashechewan First Nation;
  - Kingfisher Lake First Nation;
  - Kitchenuhmaykoosib Inninuwug First Nation;
  - Long Lake #58 First Nation;
  - Métis Nation of Ontario – Region 2;
  - Red Sky Independent Métis Nation;
  - Wapekeka First Nation;
  - Wawakapewin First Nation;
  - Weenusk (Peawanuck) First Nation; and,
  - Wunnumin Lake First Nation.
- Municipalities:
  - City of Thunder Bay;
  - City of Timmins;
  - Municipality of Greenstone;
  - Municipality of Sioux Lookout; and
  - Township of Pickle Lake.

16.2.1 Preliminary Baseline Description

Regional and Local Economy

Baseline labour activity data from Statistics Canada (2017)[9,10] show that of the Indigenous communities[11] potential with an interest or affected by the Project actively engaged in and are eligible to participate in the labour market (based on the participation rate). The Indigenous communities in close proximity to the Project have an employment rate of 41% with an average unemployment rate of 17%. For Indigenous communities in the broader area surrounding the Project, the average employment rate is 40% while the average unemployment rate is 21%. By comparison, the average employment rate (based on the participation rate) of the cities, towns, or municipalities potentially with an interest in or affected by the Project is significantly higher at 61%, while their average unemployment rate is 9%.

Community Services and Infrastructure

Community services and infrastructure, including health, housing, fire, police and ambulance services, are provided by coordinated local and regional supports.

The communities in close proximity to the Project and remote communities in the broader area surrounding the Project are generally supported by local health centres and nursing stations on reserves, as well as health services from the Sioux Lookout First Nations Health Authority (SLFNHA) and the Weeneebayko Area Health Authority (WAHA), depending on the community affiliation.

The SLNHA provides physician services/Northern clinic, telemedicine services, in-community primary care, such as physiotherapy, mental health support, and developmental services, which supports Jordan's Principle to ensure First Nations children, youth and families in the health authority areas have equitable access to needed developmental services. WAHA includes ambulance, emergency, in-patient and out-patient services.

In remote communities, nurses often are authorized to perform many services usually performed by a doctor. These nurse practitioners have 24-hour consultation access to doctors for example through the SLFNHA. For the Webequie First Nation, the community has a Nursing Station which is usually operated with three nurses, a Community Health Representative (CHR), and two full-time counsellors. The Indigenous community staff also serve as interpreters and assistants. The nurses that operate and manage the Nursing Station are experienced health professionals that coordinate health services, knowledge of healthy living, community health, and trauma management. These consultations are usually required if a patient is suffering from acute infections or serious injuries. Critical patient may be airlifted by air ambulance to a hospital in Sioux Lookout, Thunder Bay or Winnipeg.

Marten Falls Firs Nation has the Muskeg Thunder Clinic, which provides nursing services, health promotion and community health programs. Emergency medical services are provided in Greenstone with medivac aircraft used for transportation.

The communities in close proximity to the Project and those in the broader area surrounding the Project also primarily fall into two Public Health Units in the North West Region (the Thunder Bay District Health Unit) and the North East Region (the Porcupine Health Unit) for regional health services. The Thunder Bay Health District Unit has six locations within its service area. Community health programs and services promote a broad range of health initiatives that focus on for example mental health, addiction, prenatal and maternal health. Specialized medical services are provided in Thunder Bay at the Thunder Bay Regional Health Centre. The Porcupine Health Unit has nine branch offices throughout Northeastern Ontario, which similarly provide a variety of relevant and accessible programs and services, and health centres such as Timmins.

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9 Based on 25% sample data.
10 Statistics Canada data will be updated with Census 2021 data in the EAR/IS.
11 Not all Indigenous communities and groups have employment data available.

Policing support is provided by Nishnawbe Aski Police Service (NAPS) detachments in the communities in proximity to the Project. Services in the community include front line support, emergency response team, and survivor services. Remote communities generally include a volunteer fire department, with funding from Indigenous Services Canada through the Capital Facilities and Maintenance Program.

Housing in Indigenous communities in the region is a concern and there are a number of housing issues such as air quality problems, unaddressed repair and maintenance, and limited supply to meet demand for new homes to address overcrowding. According to Statistics Canada (2017), the average percentage of Indigenous homes considered not suitable (30%) and in need of major repairs (55%) is significantly higher compared to the Ontario averages of 6% for both indicators. The communities in close proximity to the Project reflect this comparison. Of these communities, WFN has the highest percentage of homes considered not suitable (42%) as well as in need of major repairs (77%).[12],[13] A 2018 housing assessment was also completed for WFN. Of 168 houses surveyed, 103 or 61% of homes required remediation and repair, and it was recommended that 18 be condemned because of extensive repairs with costs totalling more than $350,000. In the same assessment, thirty-one houses or 18% were considered overcrowded.

Land Use and Recreation

The Project is located on Crown Land. The Project intersects traplines registered to MFFN and WFN community members.

An ANSI is an area of land and/or water containing natural landscapes or features which have been identified as having life science or earth science (or both) values related to natural heritage protection, scientific study or education. Life Science ANSIs include specific types of forests, valleys, prairies and wetlands, their native plants and animals and their supportive environments. They contain relatively undisturbed vegetation and landforms and their associated species and communities. Earth Science ANSIs are geological in nature and consist of examples of the bedrock, fossil and landforms in Ontario and include examples of ongoing geological processes.

No ANSIs overlap with the Project. However, two candidate ANSIs are located near the Project, as shown on **Figure 14-1**. The two Candidate ANSIs are the Upper Ekwan River (Earth Science) and the Attawapiskat Upriver Section (Life Science).

Candidate ANSIs that have been identified and recommended for protection by the MNRF or other sources but have not completed the confirmation procedure. The MNRF confirms whether the ANSI is provincially, regionally, or locally significant.

Two provincial parks are located within the region of the Project, including the Albany River Provincial Park and the Otoskwin-Attawapiskat River Provincial Park (**Figure 14-1**).

Tourism is part of the local and regional economies. Camps, outfitters and guide work related to outdoor activities, such as fishing and hunting, is practiced in the region.

Community Safety

Baseline information collected through secondary information, documents that violence-related deaths among Indigenous women is five times higher than the national average for Canadian women (Kuokkanen, 2011, cited in Bond and Quinlan [2018]). This includes various forms of financial abuse such as either being denied knowledge of or access to family income (Brennan, 2011). Daoud et al. (2012) found that self-reported abuse towards Indigenous mothers was higher (31%) than that reported by

[12] Respective Statistics Canada (2017) data on households “not suitable” and “major repairs needed” for other communities in close proximity, include Nibinamik First Nation (39%; 56%), Eabametoong First Nation (37%; 65%); Neskantaga First Nation (13%; 73%); Marten Falls First Nation (31%; 46%).
[13] Statistics Canada data will be updated with Census 2021 data in the EA/IA.

non-Indigenous mothers (12%). The study also showed high proportions of abuse among lone mothers (35%). The severity of these issues is often exacerbated by the presence of industrial projects near Indigenous communities (Bond and Quinlan, 2018). Not only rates of violence against Indigenous women and girls are a concern connected with industrial camps and development projects, but employment opportunities and economic benefits are also a concern. Indigenous women are less likely to benefit from employment opportunities associated with resource development projects (Dalseg et al., 2018).

Further secondary information regarding crime rates and violence statistics was obtained from the Canadian Community Crime Tracker. These statistics are aggregated by the Police Department servicing the communities. The Nishnawbe Aski Police Service is responsible for policing the majority of the Indigenous communities. Total crime rates recorded by the Nishnawbe Aski Police Service in 2018 were about twice as those recorded by the Kenora municipal Ontario Provincial Police (Statistics Canada, 2018). Total violent and non-violent crime, as well as physical and sexual assault rates were higher in the Indigenous communities, while total drug violations were higher in the Thunder Bay area (Statistics Canada, 2018).

Secondary information also documents that illicit drug use rates is high among youth in Ontario compared to many other provinces and large regional differences in substance use rates among youth have been found in Ontario (e.g., between the province's Local Integrated Health Networks (LHINs)) with higher rates of certain substances (e.g., alcohol) reported in Northern Ontario. Prescription opioid use in particular is much higher among youth in Northern Ontario. Accordingly, in 2014, the rate of methadone maintenance treatment patients per 100,000 among youth (ages 15 to 24) was approximately 2-fold and 6-fold higher among the North East and North West LHIN, respectively, compared to the other LHINs in Ontario (Kurdyak et al., 2018). Remote communities have been found to have critical service gaps for addictions and mental health needs and northern and rural communities often have few mental health and addictions services. Where mental health and addictions services do exist, they are generally fragmented and disconnected from one another (Russell et al., 2019).

16.2.2 Proposed Baseline Studies

Where sources provide disaggregated data based on subgroups (i.e., women, youth, Elders, others), this data will be used in the baseline to characterize the sub-groups and to support a gender-based analysis plus (GBA+) framework.

Regional and Local Economy

Baseline information collection for regional and local economy will rely on primary information (where available) and secondary information obtained from the 2016 and/or 2021 Censuses, Community Well-Being Index, and recent community documents (e.g., Land Use Plans [LUPs]), Comprehensive Community Plans [CCPs], economic development plans). Primary information for regional and local economy will be collected for communities in the Project area through community surveys and interviews with band administration and council portfolio holders. The community documents and primary information will be especially important in providing more updated and potentially accurate information at the local scale.

Community scale baseline information including the number of community-owned businesses will be obtained through interviews in communities with band administration staff and/or council portfolio holders (e.g., economic development); community documents such as economic development plans or Land Use Plans; and community surveys.

Community scale baseline information including the supply and costs of goods and services such as groceries will be obtained through interviews with band administration staff and community surveys. While some of the Indigenous communities potentially with an interest in and/or affected by the Project participated in a (FNFNES, 2011 to 2012) that documented the average weekly cost of groceries for a family of 4 to be $247, this information needs to be updated, and community-specific information is needed.

Community Services and Infrastructure

Baseline information collection for community services and infrastructure will rely heavily on primary information (where available) and secondary information obtained from various community websites and other resources. Primary information for community services and infrastructure will be collected through community surveys and key informant interviews in communities.

Land Use and Recreation

Baseline information collection for land use and recreation will rely heavily on primary information (where available) and secondary information obtained from various community websites and other resources. Primary information for land use and recreation is being collected through surveys and key informant interviews with business owners, municipal staff or council portfolio holders.

Community Safety

Baseline information collection for community safety will rely heavily on primary information at the community scale (where available) and secondary information obtained from sources such as Statistics Canada and academic sources. Primary information will be collected through community surveys and focus groups (the latter for the potentially most affected communities), as well as in-depth interviews with social service and emergency service providers.

16.3 Cultural Heritage Resources Context

This section provides a brief description of the cultural heritage resources context in the region where the Project is located, based on information that is available to the public and/or derived from the consultation and engagement undertaken to date.

16.3.1 Preliminary Baseline Description

Some archaeological assessments have been undertaken in the broader region where the Project is located. Archaeological research to date for the region suggests that the area was occupied by humans as early as 7,000 years before present. These early humans, known as the Shield Archaic Culture, tended to locate themselves near caribou river crossings. Previous archaeological research has also shown that ungulates and fish were exploited by Aboriginal peoples from circa 1000 A.D. to contact with Europeans (Knight Piésold Consulting, 2013). Evidence also suggests that the region was intensively used during the historic fur trade. Previous research has indicated that the area is located within a region that was explored by the mid-to-late 18th century. Additionally, there is a history of mining in the region spanning from the early 20th century until the present (Knight Piésold Consulting, 2013). Although information on the archaeology of the region is limited, the Project's LSA and RSA contains areas with archaeological potential.

Baseline information on built heritage resources and cultural heritage landscapes for the LSA and RSA is limited. The Project is located on mainly undeveloped Crown lands, including the traditional land of both WFN and MFFN. Traditional activities of First Nation community members include hunting, fishing and gathering as well as cultural and spiritual activities. The Albany River was used by Europeans as early as 1657 as a route to the west from James Bay. Several trading posts were established such as Marten Falls House, Henley House, and Gloucester House, all of which are in proximity to the study area. Although considered archaeological sites without above ground manifestations, area surrounding these might be considered as cultural heritage landscapes. Other potential cultural heritage landscapes might include built heritage features such as hunting and trapping camps as well as particular natural features such as sections of rivers, ranges of hills, or muskegs (AECOM, 2020a).

16.3.2 Proposed Baseline Studies

Stage 1 Archaeological Assessment

A Cultural Heritage Baseline Study will include a Stage 1 Archaeological Assessment that will document existing archaeological sites and identify areas of archaeological potential. Previously identified built heritage resources and cultural heritage landscapes will be identified through a review of existing published data and consultation with Indigenous communities and other stakeholders and agencies. The findings from this assessment will be included in a Cultural Heritage Report detailing existing conditions and a preliminary Impact Assessment will be submitted to the MTCS in accordance with the *Ontario Heritage Act* and *Standards and Guidelines for Consultant Archaeologists* (Ministry of Tourism and Culture, 2011) and the Ontario Provincial Policy Statement, 2020 (Ministry of Municipal Affairs and Housing, 2020). A summary of the report will be included in the EAR/EIS report.

Stage 1 Archaeological Assessment will establish protocols to be implemented in the event that unexpected archaeological finds are encountered during construction of the Project. These would include:

- Notifying MTCS if any archaeological resources are impacted by the EA work. All activities impacting archaeological resources must cease immediately, and a licensed archaeologist is required to carry out an archaeological assessment in accordance with the *Ontario Heritage Act* and the Standards and Guidelines for Consultant Archaeologists.
- If human remains are encountered, all activities must cease immediately and the local police and the Registrar, Burials of the Ministry of Public and Business Service Delivery (416-326-8800) must be contacted. In situations where human remains are associated with archaeological resources, MTCS should also be notified to ensure that the site is not subject to unlicensed alterations, which would be a contravention of the *Ontario Heritage Act*.

The Cultural Heritage Baseline Study will describe the existing baseline cultural heritage conditions within the study area by identifying known or potential archaeological sites, areas with archaeological potential, built heritage resources and cultural heritage landscapes and will include a historical summary of the study area.

The Cultural Heritage Baseline report will identify and describe potential Project-specific impacts to the known and potential archaeological, built heritage resources and cultural heritage landscapes that have been identified. To assess potential effects to archaeological resources, the archaeological assessment will involve consultation with Indigenous communities, review of existing published data sources and information obtained from other stakeholders and agencies.

The Cultural Heritage Baseline report will recommend measures to avoid or mitigate potential negative impacts to known or potential built heritage resources and cultural heritage landscapes. The proposed mitigation measures are to inform the next steps of project planning and design.

Should results of the Stage 1 Archaeological Assessment confirm archaeological potential within the corridor of the preferred alternative route, the next stage of archaeological assessment would be completed as early as possible before detailed Project design is completed. Recommendations advanced to Stage 2 Archaeological Assessment would be selected based on, but not limited to, the following considerations:

- Desktop mapping to identify areas of archaeological potential;
- Proximity to historic water sources or other areas identified as having archaeological potential based on the results of the Stage 1 Archaeological Assessment;
- Professional judgment by a licensed archaeologist;
- Available IK; and
- Consultation with the MTSC.

The results of the Stage 2 Archaeological Assessment would inform the need for further archaeological investigations where the effects to identified archaeological resources cannot be avoided through detail design. The Stage 2 report would include recommendations for management of archaeological resources that can be avoided and for a process for dealing with incidental finds.

Archaeological assessment(s) will be conducted by a licensed archaeologist and will meet the requirements of the *Ontario Heritage Act* and the Standards and Guidelines for Consultant Archaeologists (MTCS, 2011).

Built Heritage Resources and Cultural Heritage Landscapes

In addition to archaeological resources, which focus on specific localities and material remains of past occupation, there are also cultural landscapes that are of strong cultural heritage value. A cultural landscape is geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including Indigenous communities. The landscape may include features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association (Government of Ontario, 2014). The cultural landscapes within the study area will be identified and characterized following the process set out in the MTCS document 'Heritage Resources in the Land use Planning Process, Info Sheet #2: Cultural Heritage Landscapes' (Ministry of Culture, 2005). Since the cultural landscapes to be addressed are largely Associative (i.e., they do not consist of formal built structures or "neighbourhoods"), the key information sources will be IK and discussions with knowledgeable community members.

16.4 Aboriginal and Treaty Rights and Interests Context

This section provides a brief description of the Aboriginal and Treaty Rights and Interests (ATRI) context in the region where the Project is located, based on information that is available to the public and/or derived from the consultation and engagement undertaken to date. For the purposes of the Project, ATRI are discussed in terms of Indigenous land and resource use (ILRU), and cultural continuity and well-being.

16.4.1 Preliminary Baseline Description

Indigenous Land and Resource Use

ILRU is defined as sites and areas used for rights-based activities and interests; location, frequency, duration, and/or timing of these rights-based activities and interests; types of resources used and their habitats; the quantity and quality of resources; culturally important resources and places based activities and interests; location, frequency, duration, and/or timing of these rights-based activities and interests; types of resources used and their habitats; the quantity and quality of resources; culturally important resources and places that are harvested; access to resources or places used; the experience of the practice; and other current uses identified by Indigenous communities or groups for rights-based activities and other interests. **Table 16-1** provides brief community profiles for the Indigenous communities and Indigenous organizations whose ATRI might potentially be affected by the Project or may otherwise have an interest in the Project and have been identified to be consulted on the Project.

Table 16-1: Community Profiles of Indigenous Communities Potentially Affected by or Interested in the Project

Indigenous Community	Community Profile
Animbiigoo-Zaagi'igan Anishinaabek First Nation Tribal Council: Nokiiwin Tribal Council	Animbiigoo-Zaagi'igan Anishinaabek First Nation (AZA) is signatory to the Robinson-Superior Treaty 1850 and is affiliated with the Nokiiwin Tribal Council. The AZA cultural affiliation is Ojibway. There is one AZA reserve, the Lake Nipigon Reserve (1,269.9 ha), which was established in 2008. The Lake Nipigon Reserve is located along the southern shores of Partridge Lake, between Jellicoe and Geraldton, approximately 240 km southwest of MFFN and 360 km south of WFN. Three registered members live on the Lake Nipigon Reserve and the remaining approximately 500 registered members live elsewhere (GoC, 2021), primarily in other Ontario communities, including Beardmore, Jellicoe, Geraldton, and Thunder Bay. The First Nation has a Custom Electoral Governance System, with one Chief and four Councillors elected every three years. AZA's administrative office is located in Beardmore, Ontario (AZA, 2021).
Aroland First Nation Tribal Council: Matawa First Nations Management Inc. Provincial Territorial Organization: Nishnawbe Aski Nation	Aroland First Nation is a signatory to Treaty 9 and is affiliated with Matawa First Nations Management Inc. and Nishnawbe Aski Nation. Although the Aroland Indian Settlement is not yet formally a reserve (in 1972, the settlement briefly was recorded as Aroland 83 Indian Reserve), it should be designated as such in the near future. Following multiple negotiations, AFN gained certain reserve status under the Indian Act on April 15, 1985. Reserve lands have recently been dedicated to the First Nation by both provincial and federal governments; however, a final formal designation of reserve lands is not yet in place. Current reserve lands contain 19,599 hectares and extend northward from Highway 643 to encompass lands along the western and northern shores of Esnagami Lake. At present, these lands are generally undeveloped (Aroland First Nation, 2021; First Nations.info, 2021). AFN (Aroland 83 Reserve) is comprised of an amalgamation of members, with ties to Eabametoong First Nation, MFFN, Ginoogaming First Nation, Long Lake #58 First Nation and Fort William First Nation, and with cultural affiliations to Oji-Cree and Ojibway (Aroland First Nation, 2021). Aroland Indian Settlement is the primary community for approximately 400 of the 747 registered AFN members (GoC, 2021; Aroland First Nation, 2021). The community is located approximately 170 km southwest of MFFN, 310 km south of WFN and 20 km west of the Municipality of Greenstone on Highway 643. AFN has a Custom Electoral Governance System, with one Chief and seven Councillors elected every two years.
Attawapiskat First Nation Tribal Council: Mushkegowuk Council Provincial Territorial Organization: Nishnawbe Aski Nation	Attawapiskat First Nation (ATFN) is a signatory to Treaty 9 and is affiliated with the Mushkegowuk Council and Nishnawbe Aski Nation. Omushkegowuk (people of Attawapiskat) are represented by the Mushkegowuk Council for their Mushkegowuk Aski (traditional territory). The Attawapiskat cultural affiliation is Swampy Cree. ATFN is comprised of two reserves: Attawapiskat Reserve 91a (235.8 ha), the permanent community, and Attawapiskat Reserve 91 (27,040.1 ha) (GoC, 2021). Attawapiskat Reserve 91 is located at the mouth of the Attawapiskat River on James Bay. Attawapiskat Reserve 91a is located approximately 230 km northeast of MFFN and 200 km east of WFN. The reserves are accessible by air, water and winter road only, and 1,983 members are listed as living on Attawapiskat reserves, with the remaining 1,677 members living elsewhere (GoC, 2021). ATFN has a Custom Electoral Governance System, with one Chief, one Deputy Chief and 11 Councillors elected every three years.

Indigenous Community	Community Profile
Constance Lake First Nation Tribal Council: Matawa First Nations Management Inc. Provincial Territorial Organization: Nishnawbe Aski Nation	Constance Lake First Nation is a signatory to Treaty 9 and is affiliated with Matawa First Nations Management Inc. and the Nishnawbe Aski Nation. The Constance Lake cultural affiliation is Cree and Ojibway. Constance Lake First Nation is comprised of two reserves: Constance Lake 92 Indian Reserve on the Kabinakagami River (3,110.5 ha), which serves as the primary residential community, and English River 66 Reserve on the Kenogami River (3,108 ha) (GoC, 2021). The Constance Lake 92 Reserve is located approximately 240 km southeast of MFFN and 415 km southeast of WFN. The English River 66 Reserve is located 170 km southeast of MFFN and 340 km southeast of WFN. Both of the Constance Lake Reserves are accessible by way of Highway 11. There are 861 of the 1,784 registered members listed as living on the Constance Lake 92 Reserve (GoC, 2021). Constance Lake First Nation uses the *Indian Act* Electoral Governance System, with one Chief and six Councillors elected every two years. Constance Lake First Nation is actively working on a Draft CBLUP; the Terms of Reference for the plan was approved in 2013 (MNRF, 2022b).
Eabametoong First Nation Tribal Council: Matawa First Nations Management Inc. Provincial Territorial Organization: Nishnawbe Aski Nation	Eabametoong First Nation is a signatory of Treaty 9 and is affiliated with Matawa First Nations Management Inc. and Nishnawbe Aski Nation. The Eabametoong cultural affiliation is Ojibway. Eabametoong First Nation is comprised of a single reserve, Fort Hope Reserve 64 (25,900.3 ha) (GoC, 2021). Fort Hope 64 is a remote northern community located approximately 360 km north of Thunder Bay, 130 km west of MFFN and 155 km south of WFN. The community is situated on the north shore of Eabamet Lake. Approximately 1,574 registered members live on the Fort Hope 64 Reserve, with the remaining 1,199 registered members living elsewhere (GoC, 2021), mostly in other parts of Northern Ontario. The Reserve is accessible by air, water and winter road only. According to the Federal Reporting Centre on Specific Claims (GoC, 2021), there is one active claim by Eabametoong First Nation related to unfulfilled Treaty Land Entitlement pursuant to Treaty 9. Eabametoong First Nation uses the *Indian Act* Electoral Governance System, with one Chief and five Councillors elected every two years.
Fort Albany First Nation Tribal Council: Mushkegowuk Council Provincial Territorial Organization: Nishnawbe Aski Nation	Fort Albany First Nation is a signatory to Treaty 9 and is affiliated with the Mushkegowuk Council and the Nishnawbe Aski Nation. Prior to 1965, the community was referred to as Peetabeck Inninowuk. The Fort Albany cultural affiliation is Mushkegowuk Cree. Omushkegowak (people of Fort Albany) lived off their Paquataskamik (traditional territory) until they were relocated to the Fort Albany 67 Reserve. The community originated as a Hudson's Bay Company trading post. In the 1950s, the Fort Albany 67 Reserve divided into two communities (Fort Albany First Nation and Kashechewan First Nation) due to religious differences (Five Nations, 2012). The Fort Albany 67 Reserve (36,345.7 ha) is unique in that there are two First Nations residing on the land (Fort Albany First Nation and Kashechewan First Nation) (GoC, 2021). Fort Albany 67 is located on the south bank of the Albany River approximately 15 km upstream from James Bay (Five Nations, 2012). It is located approximately 300 km northeast of MFFN and 390 km southeast of WFN. Fort Albany 67 is accessible by air, water and winter road only. The combined total of registered member population of Fort Albany First Nation and Kashechewan First Nation is 5,289 and is mutually referred to as 'Albany' in the Indigenous Services Canada First Nation Profile (GoC, 2021). There are 3,240 registered members of Fort Albany First Nation and Kashechewan First Nation residing on Fort Albany 67, with the remaining 2049 registered members living elsewhere (GoC, 2021). Fort Albany First Nation has a Custom Electoral Governance System, with one Chief, one Deputy Chief and seven Councillors elected every two years.

Indigenous Community	Community Profile
Ginoogaming First Nation Tribal Council: Matawa First Nations Management Inc. Provincial Territorial Organization: Nishnawbe Aski Nation	Ginoogaming First Nation, formerly known as Long Lake 77, is a signatory of Treaty 9 and is affiliated with Matawa First Nations Management Inc. and Nishnawbe Aski Nation. The Ginoogaming cultural affiliation is Ojibway and Oji-Cree. Ginoogaming First Nation is comprised of one reserve, Ginoogaming (6,978 ha), located on the northern shore of Long Lake (GoC, 2021), 2 km south of Longlac and approximately 220 km south of MFFN and 365 km southeast of WFN. The community is accessible by road (Highway 11), air, rail and water. There are 205 registered members residing on Ginoogaming First Nation Reserve, with 778 registered members residing elsewhere (GoC, 2021). According to the Federal Reporting Centre on Specific Claims (GoC, 2021), there are two active claims by Ginoogaming First Nation. One of the claims is related to alleged breaches of fiduciary obligations with respect to the construction of Tote Road through the Reserve. The second is related to unfulfilled Treaty Land Entitlement pursuant to Treaty 9, with negotiations involving 7,296 acres of land and areas of interest, including residential, economic and cultural uses (GoC, 2021). Ginoogaming First Nation uses the *Indian Act* Electoral Governance System, with one Chief and six Councillors elected every two years. Ginoogaming First Nation is not actively in the planning stage of the CBLUP (MNRF, 2022b).
Kasabonika Lake First Nation Tribal Council: Shibogama First Nations Council Provincial Territorial Organization: Nishnawbe Aski Nation	Kasabonika Lake First Nation is a signatory to Treaty 9 and is affiliated with the Shibogama First Nations Council and Nishnawbe Aski Nation. The Kasabonika Lake cultural affiliation is Oji-Cree. Kasabonika Lake First Nation is comprised of one reserve, Kasabonika Lake Reserve (10,806.5 ha) located along the Ashweig River (GoC, 2021), approximately 450 km northeast of Sioux Lookout, 285 km northwest of MFFN and 115 km northwest of WFN. It is accessible by air, water and winter road only. There are 1,130registered members residing on the Kasabonika Lake reserve, with the remaining 95 members living elsewhere (GoC, 2021). Kasabonika Lake has a Custom Electoral Governance System, with one Chief, one Deputy Chief, one Head Councillor and four Councillors elected every two years. Kasabonika Lake First Nation is not actively in the planning stage of the CBLUP (MNRF, 2022b).
Kashechewan First Nation Tribal Council: Mushkegowuk Council Provincial Territorial Organization: Nishnawbe Aski Nation	Kashechewan First Nation is a party to Treaty 9, and it is affiliated with the Mushkegowuk Council and Nishnawbe Aski Nation. Omushkegowuk (people of Kashechewan) are represented by the Mushkegowuk Council for their Mushkegowuk Aski (traditional territory). The Kashechewan cultural affiliation is Moose Cree and Swampy Cree. The community originated as a Hudson's Bay Company trading post. Prior to 1950, Kashechewan members were part of the Fort Albany First Nation at Treaty-making time in 1905, when Albany Band representatives signed the Treaty 9 document and accepted certain important oral promises by the government Treaty Commissioners (Five Nations, 2012; KFN, 2022). During the 1950s, the Fort Albany 67 Reserve divided into two communities (Kashechewan First Nation and Fort Albany First Nation) due to religious differences (Five Nations, 2012). In the 1950s and 1960s, most members of the Albany Band resided on an island in the Albany River, off the Treaty reserve land, but when government representatives suggested they would be better supported on reserve, a considerable portion of the Albany Band moved to the northern shoreline of the Albany River, onto reserve land, to what is now known as Kashechewan (KFN, 2022). The Fort Albany 67 Reserve (36,345.7 ha) is shared by both Fort Albany First Nation and Kashechewan First Nation (GoC, 2021), and is located approximately 300 km northeast of MFFN and 380 km southeast of WFN. It is accessible by air, water and winter road only.

Indigenous Community	Community Profile
	The combined total registered member population of Kashechewan First Nation and Fort Albany First Nation is 5,289 and is mutually referred to as 'Albany' in the Indigenous Services Canada First Nation Profile (GoC, 2021). There are 3,240 registered members of Kashechewan First Nation and Fort Albany First Nation residing on Fort Albany 67, with the remaining 2049 registered members living elsewhere (GoC, 2021). Kashechewan First Nation has a Custom Governance System, with one Chief, one Deputy Chief and 9 Councillors elected every four years.
Kingfisher Lake First Nation Tribal Council: Shibogama First Nations Council Provincial Territorial Organization: Nishnawbe Aski Nation	Kingfisher Lake First Nation is a signatory to Treaty 9 and is affiliated with the Shibogama First Nations Council and Nishnawbe Aski Nation. The Kingfisher Lake cultural affiliation is Oji-Cree. Kingfisher Lake First Nation is comprised of three reserves: Kingfisher 2A (5,444.7 ha), Kingfisher 3A (921.9 ha), and Kingfisher Lake 1 (596 ha) (GoC, 2021). The Kingfisher Lake 1 Reserve is the most populated of the three. It is located on the south shore of Kingfisher Lake, approximately 360 km northeast of Sioux Lookout (which is the nearest service centre), 305 km northwest of MFFN and 165 km west of WFN. The reserves are accessible by air, water and winter road only. There are 560 of the 627 total registered members residing on reserve, with the remaining registered members living elsewhere (GoC, 2021). Kingfisher Lake First Nation has a custom Electoral Governance System, with one Chief, one Deputy Chief, one Head Councillor and three Councillors elected every two years.
Kitchenuhmaykoosib Inninuwug First Nation Tribal Council: Independent First Nations Alliance	Kitchenuhmaykoosib Inninuwug First Nation is a signatory to Treaty 9. It is an independent First Nation and is affiliated with the Independent First Nations Alliance. The Kitchenuhmaykoosib cultural affiliation is Oji-Cree, specifically Anishininiimowin, Severn Cree and Northern Ojibway. Kitchenuhmaykoosib Inninuwug First Nation is comprised of a single reserve, Kitchenuhmaykoosib Aaki 84 (29,937.6 ha) on the north shore of Big Trout Lake (GoC, 2021), located approximately 440 km northeast of Sioux Lookout, 360 km northwest of MFFN and 195 km northwest of WFN. It is accessible by air, water and winter road only. There are 1,180registered members residing on the Kitchenuhmaykoosib Aaki Reserve, with the remaining 558 registered members residing elsewhere (GoC, 2021). Kitchenuhmaykoosib Inninuwug First Nation has a Custom Electoral Governance System, with one Chief, one Deputy Chief, and six Councillors elected every two years.
Long Lake #58 First Nation Tribal Council: Matawa First Nations Management Inc. Provincial Territorial Organization: Nishnawbe Aski Nation	Long Lake #58 First Nation has not signed any Treaty or ceding Aboriginal title to their traditional lands. The Long Lake #58 First Nation is affiliated with Matawa First Nations Management Inc., the Nishnawbe Aski Nation and the Union of Ontario Indians (UOI). The Long Lake #58 cultural affiliation is Ojibway. Long Lake #58 First Nation is comprised of a single reserve, Long Lake 58 (232.3 ha) located on the northern shore of Long Lake (GoC, 2021), adjacent (1 km) to Longlac and approximately 215 km south of MFFN and 360 km south of WFN. There are 542 registered members residing on Long Lake 58, with 1,215 registered members residing elsewhere (GoC, 2021). Long Lake #58 First Nation uses the *Indian Act* Electoral Governance System, with one Chief and 11 Councillors elected every two years.

Indigenous Community	Community Profile
Marten Falls First Nation Tribal Council: Matawa First Nations Management Inc. Provincial Territorial Organization: Nishnawbe Aski Nation	MFFN is a signatory to Treaty 9 and is affiliated with Matawa First Nations Management Inc. and Nishnawbe Aski Nation. The MFFN's cultural affiliation is Ojibway. MFFN is comprised of one reserve, Marten Falls Reserve 65 (7770.1 ha) on the Hudson Bay Lowlands in Northern Ontario (GoC, 2021), at the intersection of the Ogoki and Albany Rivers and approximately 400 km northeast of Thunder Bay and 175 km southeast of WFN. It is currently accessible by air, water and winter road only. The Municipality of Greenstone is the closest location with year-long road access, approximately 160 km to the south. There are 354 registered members residing on the Marten Falls Reserve, with the remaining 473 registered members living elsewhere (GoC, 2021). MFFN uses the *Indian Act* Electoral Governance System, with one Chief and seven Councillors elected every two years.
Métis Nation of Ontario – Region 2	The Métis Nation of Ontario (MNO) was established in 1993 to represent communities that are a part of the Métis Nation (MNO, 2021). Today, there are over 20,000 registered Métis citizens and approximately 30 Chartered Community Councils across Ontario that represent Métis citizens at the local level. Through the MNO, Ontario Métis have established a governance structure that represents the Métis citizens and rights-bearing Métis communities at the local, regional and provincial levels. The MNO has a provincial governing body that is elected every four years. The MNO hosts an Annual General Assembly, where regional and provincial Métis leaders are required to report back to Métis citizens yearly between elections. The MNO also maintains a charitable foundation, the Métis Nation of Ontario Cultural Commission, which promotes and supports Métis culture and heritage, and an economic development arm, the Métis Nation of Ontario Development Corporation (MNO, 2021).
Neskantaga First Nation Tribal Council: Matawa First Nations Management Inc. Provincial Territorial Organization: Nishnawbe Aski Nation	Neskantaga First Nation is a signatory to Treaty 9 and is affiliated with Matawa First Nations Management Inc. and Nishnawbe Aski Nation. The Neskantaga cultural affiliation is Ojibway and Oji-Cree. Neskantaga First Nation is comprised of one reserve, Neskantaga Reserve (831.5 ha) located on Attawapiskat Lake (GoC, 2021), approximately 200 km north of the Municipality of Greenstone, 180 km northeast of Pickle Lake, 160 km northwest of MFFN and 100 km southwest of WFN. It is accessible by air, water and winter road only. There are 357 registered members residing on the Neskantaga Reserve, with the remaining 137 registered members living elsewhere (GoC, 2021). Neskantaga First Nation has a Custom Electoral System, with one Chief and four Councillors elected every two years.
Nibinamik First Nation Tribal Council: Matawa First Nations Management Inc. Provincial Territorial Organization: Nishnawbe Aski Nation	Nibinamik First Nation, known as Summer Beaver, is a signatory to Treaty 9 and is affiliated with Matawa First Nations Management Inc. and Nishnawbe Aski Nation. The Nibinamik cultural affiliation is Ojibway. Nibinamik First Nation is comprised of the recently recognized reserve of the Summer Beaver Settlement, which is located on Nibinamik Lake (GoC, 2021). The community is located approximately 480 km north of Greenstone, 210 northwest of MFFN and 70 km southwest of WFN. It is accessible by air, water and winter road only. According to Indigenous Services Canada (GoC, 2021), 75 registered members live on their 'own reserve' and the remaining 464 registered members live elsewhere. There are 380 registered members residing in the Summer Beaver Indian Settlement (GoC, 2021). Nibinamik First Nation has a Custom Electoral Governance System, with one Chief, one Head Councillor and three Councillors elected every two years.

Indigenous Community	Community Profile
Red Sky Métis Independent Nation	Red Sky Métis Independent Nation (RSMIN) is comprised of descendants of the 84 Métis who were beneficiaries and annuitants under the Robinson-Superior Treaty 1850. As of August 2014, RSMIN is recognized as a non-status Nation (RSMIN, 2021). The administrative office for Red Sky Métis Independent Nation is located in Thunder Bay, approximately 430 km southwest of MFFN and 520 km south of WFN. There are approximately 8,000 members with an elected Chief (RSMIN, 2021).
Wapekeka First Nation Tribal Council: Shibogama First Nations Council Provincial Territorial Organization: Nishnawbe Aski Nation	Wapekeka First Nation is a signatory to Treaty 9 and is affiliated with the Shibogama First Nations Council and Nishnawbe Aski Nation. Wapekeka was formerly known as the Angling Lake First Nation. The Wapekeka cultural affiliation is Oji-Cree. Wapekeka First Nation is comprised of two reserves: Wapekeka Reserve 1 (3,605 ha) and Wapekeka Reserve 2 (2,026.5 ha) (GoC, 2021). Wapekeka Reserve 2 serves as the residential community and is located on the shores of Otter Lake, approximately 440 km northeast of Sioux Lookout, which is the nearest service centre and approximately 345 km northwest of MFFN and 175 km northwest of WFN. Wapekeka Reserve 1 is located approximately 10 km south of the main community. The community is accessible by air through the off-reserve Angling Lake/Wapekeka Airport, as well as partially accessible by boat and a winter road. There are 498 of the 513 registered members residing on Wapekeka Reserve lands, with the remaining residing elsewhere (GoC, 2021). Wapekeka First Nation has a Custom Electoral Governance System, with one Chief, one Deputy Chief, and three Councillors elected every two years.
Wawakapewin First Nation Tribal Council: Shibogama First Nations Council Provincial Territorial Organization: Nishnawbe Aski Nation	Wawakapewin First Nation is a signatory to Treaty 9 and is affiliated with the Shibogama First Nations Council and Nishnawbe Aski Nation. The Wawakapewin cultural affiliation is Oji-Cree. Wawakapewin First Nation is comprised of one reserve, the Wawakapewin Reserve (5,221 ha) (GoC, 2021), which is located approximately 300 km northwest of MFFN and 130 km northwest of WFN. Approximately half of the 36 registered members reside on the Wawakapewin Reserve, with the remaining registered members residing elsewhere (GoC, 2021). Wawakapewin First Nation has a Custom Electoral Governance System, with one Chief and one Councillor elected every three years.
Webequie First Nation Tribal Council: Matawa First Nations Management Inc. Provincial Territorial Organization: Nishnawbe Aski Nation	Webequie First Nation (WFN) is a signatory to Treaty 9 and is affiliated with Matawa First Nations Management Inc. and Nishnawbe Aski Nation. The Webequie cultural affiliation is Oji-Cree. WFN is comprised of one reserve, Webequie Reserve (34,279 ha), located on the northern peninsula of Eastwood Island on Winisk Lake (GoC, 2021), approximately 540 km north of the city of Thunder Bay and 175 km northwest of MFFN. The community is accessible by air via the on reserve remote Webequie Airport, by water and winter road. There are 326 of the registered members residing on the Webequie Reserve, while the remaining 611 registered members live elsewhere (GoC, 2021). WFN has a Custom Electoral System, with one Chief, one Head Councillor and five Councillors elected every two years.
Weenusk (Peawanuck) First Nation Tribal Council: Independent First Nations	Weenusk (Peawanuck) First Nation is a signatory to Treaty 9 and is affiliated with Nishnawbe Aski Nation. The Weenusk First Nation cultural affiliation is Cree in the n-dialect. Anishininiimowin and Ojibwemowin are also spoken. Weenusk people used to live in the community of Winisk near the mouth of the Winisk River until the community moved to Peawanuck due to flooding. Peawanuck is located near the confluence of the Winisk and Shamattawa Rivers, approximately 30 km upriver from Winisk. Weenusk First Nation is comprised of one

Indigenous Community	Community Profile
Provincial Territorial Organization: Nishnawbe Aski Nation	reserve, Winisk Reserve 90 (5,310 ha), and the Winisk Indian Settlement (GoC, 2021), both of which are located approximately 45 km from Hudson Bay along the Winisk River, approximately 375 km north of MFFN and 260 km northeast of WFN. There are 25 registered members living on Winisk Reserve 90, while the majority of the 605 registered members live elsewhere (GoC, 2021). Weenusk First Nation has a Custom Electoral Governance System, with one Chief and three Councillors elected every two years.
Wunnumin Lake First Nation Tribal Council: Shibogama First Nations Council Provincial Territorial Organization: Nishnawbe Aski Nation	Wunnumin Lake First Nation is a signatory to Treaty 9 and is affiliated with the Shibogama First Nations Council and Nishnawbe Aski Nation. The Wunnumin cultural affiliation is Oji-Cree. Wunnumin Lake First Nation is comprised of two reserves, Wunnumin 1 (5,855.1 ha) and Wunnumin 2 (3,794.4 ha) (GoC, 2021). The reserves are located approximately 385 km northeast of Sioux Lookout, 177 km northeast of Pickle Lake, 255 km northwest of MFFN and 120 km west of WFN. The community is accessible by air through the off-reserve remote Wunnumin Lake Airport, by water, and by winter road. There are 584 of the 723 registered members residing on the Wunnumin reserves, with the remaining registered members living elsewhere (GoC, 2021). Wunnumin Lake First Nation has a Custom Electoral System, with one Chief, one Deputy Chief, one Head Councillor and three Councillors elected every two years.

Cultural Continuity and Well-being

Cultural continuity and well-being is defined as traditions, customs, protocols, values, spirituality, ceremonies, language, ways of knowing and being, and connections to the land and culturally important sites, areas, and resources including any structure, site, or thing that is of historical, archaeological, paleontological, or architectural significance; cultural landscapes and access to travel routes, the experience of being on the land and way of life tied to well-being and outlook of Indigenous communities, community cohesion, cultural knowledge transfer and protection of language as well as diet and food security. Same as for ILRU, **Table 16-1** provides brief community profiles for the Indigenous communities and Indigenous organizations whose ATRI might potentially be affected by the Project or may otherwise have an interest in the Project and have been identified to be consulted on the Project.

16.4.2 Proposed Baseline Studies

The proposed baseline studies described in this section would collect information concurrently for both ILRU, and cultural continuity and well-being. Where sources provide disaggregated data based on subgroups (i.e., women, youth, Elders, others) this data will be used in the baseline to characterize the sub-groups and to support a GBA+ framework.

Desktop Analysis

A desktop analysis of existing publicly available information sources will be completed to collect information relevant to the rights and interests of Indigenous communities and groups identified in **Section 16.4.1**. This information will be considered preliminary until it is validated by Indigenous communities and groups and substantiated through further study and inputs from Indigenous communities and groups.

Information related to IK/ILRU, cultural values and practices, rights and interests is typically considered sensitive/confidential and is usually not publicly available. Further, it is important to understand the specific context in which relevant background resources were developed. To increase trust and build relationships, the proponent will seek direction from Indigenous communities and groups with respect to the interpretation and use of existing/available IK that they are willing to share and that should be included in the document

review. This is expected to be an ongoing and iterative process. Where secondary sources of relevant IK information are available, permission from Indigenous groups to use the information will be sought prior to inclusion and the content to be included will be validated with Indigenous communities for integration into the EA/IA.

The desktop analysis will support the establishment of baseline conditions with respect to:

- The physical and cultural heritage of each Indigenous group: burial sites; cultural values; experiences of being on the land; and sacred, ceremonial, or culturally important places, plants, animals, objects, beings, or things;
- ILRU: traditional activities presently or historically practiced; location, frequency, duration and/or timing of these activities; types of resources used and their habitats; the quantity and quality of resources; culturally important resources and places that are harvested; access to resources or places used; the experience of the practice; and other uses identified by Indigenous communities or groups; and
- Conditions related to the rights and interests of Indigenous peoples: areas in which rights and interests are exercised in the area of the Project, including historical, regional and community context; the quality and quantity of resources required to support the exercise of rights; access to resources required; experience associated with the exercise of rights; landscape considerations for the exercise of rights; specific areas of cultural importance; cultural traditions, identified thresholds related to the exercise of rights; and background or cumulative effects that are already interfering with the exercise of rights or the transmission of culture and cultural practices.

Indigenous Knowledge Program

An IK Program will be conducted to collect IK/ILRU information (e.g., native traditional/country foods, medicinal plants, culturally important plants, harvest areas, sacred sites), for consideration and incorporation in the EA/IA. The IK Program will include collection of existing IK/ILRU information, as well as completion of Project--specific studies.

The IK Program will consist of two concurrent key information collection and/or sharing activities:

1. Collecting existing IK/ILRU and relevant information previously collected by communities for other purposes that they choose to share with the proponent; and
2. Completing Project-specific studies to collect and report on IK, ILRU, cultural values and Indigenous rights and interests (Project-specific studies).

A Guidance Document will be developed at the outset of the IK Program, during the ToR stage of the Project, to support the collection and/or sharing of IK information.

Associated guidance materials will be included that are intended to serve as a ‘toolbox’ for communities to support IK data collection and sharing.

These materials will be directly informed by the provincial requirements, best practices, Indigenous perspectives provided by community members, and professional experience. The proponent will host meetings with Indigenous communities and groups who express interest in participating in the IK Program to discuss IK Sharing Agreements, funding, timelines, and relevant information and/or existing data communities and groups are willing to share, and to answer questions about the program. The proponent will also continue to solicit interest in the IK Program from other Indigenous communities who have not yet expressed an interest.

The IK Program will be led by each of the participating Indigenous communities. IK/ILRU will be incorporated into the effects assessment for each environmental component as it becomes available. IK/ILRU data will be collected throughout the EA/IAs and will be incorporated directly into a number of aspects of the EA/IA database and assessment, including:

- Establishment of existing conditions of the study areas as the baseline;
- Input into the identification and evaluation of alternative road corridors;
- Identification of Project interactions and potential effects, including potential impacts to community Aboriginal Treaty Rights and Interests;
- Identification of effective and established mitigation measures to reduce potential effects to ATRI;
- Identification of potential methods to accommodate for potential impacts to ATRI that cannot be mitigated;
- Identification of residual effects (i.e., net effects) after applying mitigation measures and accommodation;
- Assessment of cumulative effects to ATRI; and
- Follow-up commitments and monitoring programs for the assessment.

Information collected by the participating communities will only be applied once it has been validated by the community.

Sharing of Existing Information

Some Indigenous communities and groups may have relevant existing IK and information on ILRU and cultural values from previously completed or ongoing CBLUP processes or other activities. Existing IK and other relevant information and/or data will be (or has already been) requested from Indigenous communities and groups through the following channels:

- In-person Project information sessions;
- CBLUP meetings;
- Community-specific Project meetings related to the IK Program;
- Distribution of letters informing Indigenous communities and groups of the IK Program;
- Distribution of the IK Guidance Document; and
- Project Website.

It is understood that some communities have existing IK and information that may be relevant to the Project that they may be willing to share. The proponent will continue to meet and work with Indigenous communities and groups, as needed, to facilitate the sharing of existing and relevant IK and information on ILRU, cultural practices and values, and rights and interests. It is anticipated that all IK and information on ILRU shared through the program will be governed by IK Sharing Agreements that indicate how confidential information will be used to inform the effects assessment but will be protected from public or third-party disclosure.

Project-specific Studies

Project-specific studies are intended to enable primary information and data collection to support the establishment of baseline conditions and the assessment of Project effects on ATRI; these studies are also intended to support the collection of IK/ILRU and perspectives relevant to the technical aspects of the EA/IA including environment, health, social and economic conditions, where possible. As described in the earlier section, the Guidance Document and associated materials are intended to facilitate this.

Based on communications to date, it is expected that Indigenous communities or groups interested in participating in the IK Program and specifically in completing a Project-specific study will undertake these studies on their own or with the support of consultants. Thus, it is expected that each participating community or group will implement community-specific cultural protocols throughout the study in terms of participant selection and the type(s) of engagement and information collection activities employed. It is also understood

that there have already been significant efforts to collect IK and information on ILRU and cultural values in some of the communities. Given this, it is expected that communities undertaking a Project-specific study will employ a methodology that will suit their needs and community protocols. However, the following general study approach has been included in the Guidance Document:

- Review existing information that may be available: this could be used to identify any gaps to inform a Project-specific study if one will be undertaken;
- Select study participants: this should be done with consideration for the importance of selecting a diversity of participants (women, Elders, youth, gender diverse peoples and those with disabilities);
- Prepare for information collection: this includes an overview of considerations (e.g., whether a translator will be required) with reference to best practices and the toolbox of materials included in the guide;
- Collect the information: this could be done through workshops, focus groups, interviews, or a combination of these depending on what will work best for each community or group;
- Digitize data: this will enable mapping for reporting purposes and to inform the Project assessment and planning processes;
- Validate the information: this is important to confirm that information and spatial data was documented accurately and appropriately; and
- Report on the information: this should include an overview of how information was collected and present the information both in text and through mapping.

Part D: Federal, Provincial, Territorial, Indigenous and Municipal Involvement Effects

Part D provides an overview of federal, provincial, territorial, Indigenous and municipal involvement for the Project.

17 Financial Support from Federal Authorities

There is currently no confirmed federal financial support for the Project.

18 Use of Federal Lands for the Project

There are no federal lands that are anticipated to be used directly for the Project. The reserve lands of the MFFN, WFN, and Eabametoong First Nation that are under federal jurisdiction are located within 100 km of the Project. The proximity of the Project to these reserve lands is summarized in **Table 14-4** and shown on **Figure 14-1**.

19 Jurisdictions that Have Powers, Duties or Functions Related to the Project's Environmental Effects

This section provides a list of any jurisdictions that have powers, duties or functions in relation to an assessment of the Project's environmental effects.

19.1 Federal Impact Assessment Act, S.C. 2019, c. 28, s. 1

As noted in **Section 9**, the Project is a designated project in accordance with the *Physical Activities Regulations* SOR/2019-285 under the IAA. Scheduled projects are required to prepare Initial and Detailed Project Descriptions for submission to the Agency for a determination of whether a federal IA is required. It is anticipated that a federal IA will be required for the Project, and will include the following phases[14]:

› **Planning Phase (180 days):**

- The proponent submits an Initial Project Description.
- The Agency engages with Indigenous groups, the public, other jurisdictions, and expert agencies and departments on the Initial Project Description.
- The Agency prepares a Summary of Issues.
- The proponent submits a Detailed Project Description with Response to the Summary of Issues.
- The Agency determines if an Impact Assessment is required and posts a Notice of Impact Assessment Decision with Reasons.

[14] Agency guidance on the Impact Assessment process is available at https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/impact-assessment-process-overview.html

- The Agency engages with Indigenous groups, the public, other jurisdictions, and expert agencies and departments in order to develop the TISG, as well as the Cooperation Plan, Indigenous Engagement and Partnership Plan, Permitting Plan, and Public Participation Plan. Once finalized, the Agency provides the TISG and related Impact Assessment process plans to the proponent and posts the documents to the Canadian Impact Assessment Registry with the Notice of Commencement.

› **Impact Statement Phase (3 years):**

- The proponent has up to three years to prepare and submit a satisfactory Impact Statement (IS) in accordance with the TISG.

› **Impact Assessment Phase (300 days):**

- Once the Agency is satisfied with the content of the IS, the 300-day Impact Assessment phase begins, and the Agency prepares a draft Impact Assessment Report (IAR). The Agency considers comments received on the draft IAR, finalizes the IAR and potential conditions, and provides the IAR, potential conditions, and Consultation Report to the Minister of Environment and Climate Change for a decision.

Table 19-1 provides a summary of federal regulatory milestones for the Project and estimated dates.

Table 19-1: Federal Regulatory Milestones

Milestone	Federal Process Estimated Dates
Submission of Initial Project Description	January 2023
The Agency posts Public Notice and News Release to the Canadian Impact Assessment Registry and engages with Indigenous groups, the public, other jurisdictions, and federal expert agencies and departments on the Initial Project Description	February 2023
The Agency prepares Summary of Issues	March 2023
Submission of Detailed Project Description with Response to the Summary of Issues	April 2023
The Agency determines if an Impact Assessment is required and posts Notice of Impact Assessment Decision with Reasons	May 2023
The Agency engages on the Draft Tailored Impact Statement Guidelines (TISG) and the draft planning documents (Cooperation Plan, Indigenous Engagement and Partnership Plan, Permitting Plan, and Public Participation Plan)	May 2023
The Agency issues final TISG and planning documents (Cooperation Plan, Indigenous Engagement and Partnership Plan, Permitting Plan, and Public Participation Plan), along with the Notice of Commencement of an Impact Assessment	July 2023
Submission of Draft EAR/IS	TBD
The Agency engages on the Draft EAR/IS and requires the proponent to provide missing information or clarifications, as necessary	TBD
Submission of EAR/IS	TBD
The Agency engages on the EAR/IS and requires the proponent to provide missing information or clarifications, as necessary	TBD
Submission of Final EAR/IS	TBD
The Agency accepts the Final EAR/IS and issues notice that the Final EAR/IS contains all the required information and studies	TBD
The Agency prepares and engages on the draft Impact Assessment Report (IAR) and draft potential conditions	TBD

Milestone	Federal Process Estimated Dates
The Agency provides the IAR and potential conditions to the Minister for consideration	TBD
The decision-maker (Minister or Governor in Council) issues a Decision Statement with the reasons for the determination and any conditions	TBD
Consultation and Engagement	Throughout the duration of the Project
Other permits and approvals	TBD

The Agency = Impact Assessment Agency of Canada, EAR/IS = Environmental Assessment Report/Impact Statement.

19.2 Ontario Environmental Assessment Act, RSO 1990, c. E. 18

The Project is subject to the EA Act. On October 28, 2020, MFFN and WFN entered into a Voluntary Agreement with the Minister of the Environment, Conservation and Parks (MECP, MFFN and WFN, 2020), thereby confirming the environmental planning process to be undertaken for the Project, including the need to prepare a Comprehensive EA. The Comprehensive EA process is considered appropriate for addressing the Project's scale, complexity and potential effects. Accordingly, the Project is following a Comprehensive EA process.

The following guidance documents will inform the requirements and preparation of the EAR/IS under the EA Act:

- *Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario (EA Code of Practice* [MOE, 2014b]);
- *Code of Practice: Consultation in Ontario's Environmental Assessment Process* (MOE, 2014c); and
- *Considering Climate Change in the Environmental Assessment Process* (MOECC, 2017).

Table 19-2 provides a summary of provincial regulatory milestones for the Project and estimated dates.

Table 19-2: Provincial Regulatory Milestones

Milestone	Provincial Process Estimated Dates
Notice of Commencement of Terms of Reference (ToR)	May 4, 2021
Circulation and Notice of Draft ToR	November 24, 2021
Submission of Proposed ToR to MECP	April 29, 2022
Minister's Decision on Proposed ToR	Winter 2023
Notice of Commencement of EA	Winter 2023
Submission of Draft EAR/IS	TBD
Notice of Draft EA/IA for Review	TBD
Submission of Final EAR/IS	TBD
Minister issues Decision on EA	TBD
Consultation and engagement	Throughout the duration of the Project
Other permits and approvals	TBD

EA = Environmental Assessment, EAR/IS = Environmental Assessment Report/Impact Statement, MECP = Ontario Ministry of the Environment, Conservation and Parks.

19.2.1 Class Environmental Assessments

The Project may require the completion of Class EAs prior to proceeding with construction, including Class EAs under MNRF for aggregate resources. The Province of Ontario is undergoing a modernization process for Class EAs, where a new set of legislative, regulatory and policy changes have been proposed and are currently being consulted on (Government of Ontario, 2021). Required Class EAs for the Project will be identified in consultation with provincial agencies, including the potential application of a Class EA for Resource Stewardship and Facility Development projects. The Comprehensive EA, and appropriate notices, will specify the intent to meet some or all of the Class EAs applicable to the Project in conjunction with the Comprehensive EA requirements, in consultation with relevant provincial agencies.

19.3 Process for Federal-Provincial Coordinated EA

Projects subject to both the EA Act and the IAA may have different environmental assessment/impact assessment approval requirements under each Act. Such projects need a coordinated process to meet the requirements of both Acts concurrently. To guide this coordinated process, Canada and Ontario entered into an agreement entitled “Canada-Ontario Agreement on Environmental Assessment Cooperation (2004)” (Minister of the Environment [Ontario] and Minister of the Environment [Canada], 2004). It is anticipated that the Project may undergo a coordinated Federal-Provincial assessment process. If so, the proponent will produce one body of documentation, referred to as the EAR/IS. The EAR/IS will address the requirements of both the provincial ToR and the federal TISG. To help facilitate a coordinated process, an “EA/IA Coordination Team” has been established for this Project that includes representatives of both the federal and provincial governments. The purpose of this team is to address and coordinate the requirements of both processes in an efficient manner.

The EA/IA Coordination Team consists of representatives from the following provincial agencies and federal authorities:

- MECP;
- MINES;
- MNRF;
- MTO; and
- The Agency.

The EA/IA Coordination Team meets with the proponent on a regular basis, in a forum where team members can exchange information, including providing each other with updates on the EA/IA process; explore issues and collectively try to resolve them; work on coordinating and keep the processes moving forward in lockstep to the greatest possible extent; and seek feedback on Indigenous, public and stakeholder consultation and engagement. Meetings with the EA/IA Coordination Team are scheduled to occur every two weeks via teleconference, and in-person when it is determined to be of assistance.

Projects undergoing a coordinated Federal-Provincial process are subject to two separate decisions, one for the EA from the province and one for the IA from the federal Agency. In a coordinated EA/IA, the Agency and the MECP will determine, on a project by project-basis, the relevant milestones for the coordinated process.

Guidance and tools that may help inform the EA/IA requirements and process will include but not be limited to:

- Practitioner’s Guide to Federal Impact Assessments under the IAA (the Agency, 2021b);
- Cumulative Effects Assessment Practitioners Guide (Hegmann et al., 1999); and
- Assessing Cumulative Environmental Effects under the *Canadian Environmental Assessment Act, 2012* (Canadian Environmental Assessment Agency, 2018 [interim guidance until new guidance is released under the IAA]).

In addition, the EA/IA may be informed by the ongoing Regional Assessment in the Ring of Fire Area as the information becomes available.

19.4 Other Relevant Legislation and Permits

The EAR/IS will include a detailed list of other approvals that may be needed for the Project.

The Project will likely require various additional federal and provincial permits, licences, approvals, authorizations and other forms of clearance in order to implement the Project, for activities related to the construction and operations phases. The proponent and relevant authorities will discuss applicable approvals with potentially affected Indigenous communities and other affected parties, as required, through the EA/IA process. Depending on the status of consultation and engagement efforts through the EA/IA process, additional consultation on permits and approvals may be required following completion of the EAR/IS. A summary of these potential permits and approvals is presented in the following sections and is based on the current concept for the Project. This preliminary list of permits/approvals is not exhaustive and will be refined as the Project design is further advanced through the EA/IA, with input provided by applicable authorities.

19.4.1 Federal

In addition to approval under the IAA, the Project may require permits and approvals under federal legislation as identified in **Table 19-3**.

Table 19-3: Federal Legislation, Permits and Other Authorizations

Regulator	Legislation/Permit/Act	Applicability to the Project
Transport Canada	*Canadian Navigable Waters Act*	Consult with Transport Canada on any work in or over a navigable waterbody that may interfere substantially with navigation (e.g., construction of a bridge, boom, dam or causeway, dumping of fill in or excavation of materials from the riverbed, placement of any power cable, wire, structure or device). There are no crossings of waterbodies listed in the Schedule to the Act designating Navigable Waters, but there will be major, minor and other works on unlisted waterways deemed to be navigable that will be subject to the Act's provisions.
Department of Fisheries and Oceans (DFO)	Authorization under *Fisheries Act*	Work or undertaking that may result in harmful alteration, disruption or destruction (HADD) of fish or fish habitat.
ECCC	Permit under *Species at Risk Act* (2002) *Section 73*	Work that causes a specified effect to a terrestrial, avian or aquatic species listed under SARA Schedule 1, or its habitat, and which contravenes the Act's general or critical habitat prohibitions (includes intrusive methods for sampling).
	Letter of Advice or Damage/Danger Permit under the *Migratory Birds Convention Act*	Prohibits the disruption or loss of active migratory nests, or harm or loss of eggs, young, and breeding adults. Mitigation required when working during nesting periods.
Natural Resources Canada	Blasting Explosives Purchase and Possession Permit under the *Explosives Act* Transportation of Explosives Permit under the *Explosives Act*	Purchase, use, storage or transportation of explosives.

19.4.2 Provincial

In addition to approval under the EA Act, the Project may require approvals, permits or other authorizations, or may otherwise be affected by requirements under the provincial legislation as identified in **Table 19-4**.

Table 19-4: Provincial Legislation, Permits and Other Authorizations

Regulator	Permit/Act	Corresponding Applicability to the Project
MNRF	Permit to Collect Fish for Scientific Purposes under the *Fish and Wildlife Conservation Act* (1997)	A Permit is required to allow the capture and transfer of fish during in-water works, such as cofferdam construction and/or dewatering.
	Permit to Collect Wildlife for Scientific Purposes under the *Fish and Wildlife Conservation Act* (1997)	A Permit is required to allow the capture and transfer of wildlife.
	Authorization under the *Fish and Wildlife Conservation Act* (1997)	Project construction, operation and maintenance activities, including clearing, grubbing dewatering and damming of water, could impact the nests or eggs of birds, or beaver dams, or the dens of black bears or some furbearing wildlife, or interfere with black bears in their dens. During operations, some maintenance activities in particular, also could have an effect on wildlife, including nests and dens. Authorization to destroy/take/possess nests or eggs under the *Fish and Wildlife Conservation Act* may be required. Authorization under the *Fish and Wildlife Conservation Act* is also required to interfere with or destroy a black bear or furbearing mammal den, beaver den or black bear in a den.
	A Permit to Remove or a Sale and Purchase Agreement under the *Crown Forest Sustainability Act* (1994)	A Permit to Remove or a Sale and Purchase Agreement will be required to harvest and/or cut timber. Either instrument can only be obtained where the activity for which trees must be harvested (ex. road construction, aggregate extraction) has received prior approval under the appropriate legislation.
	Burn Permit under *Forest Fires Prevention Act* (1990) and Ontario Regulation 207/96	A Burn Permit is required to allow burning of materials from forest clearing, if required.
	Public Lands Act (1990)	The Project includes works on Crown lands and/or shore lands, including geotechnical investigations, construction/upgrade of access roads and trails, and culverts/bridges. Road construction is typically authorized via a Work Permit under the *Act.* Water crossings (culverts, bridges, snowfill) are authorized via a Work Permit under the *Act.*
	Land Use Permits under the *Public Lands Act, 1990*	Activities requiring occupation of public lands (e.g., worker camps, waste areas and/or laydown yards) are typically authorized by a Land Use Permit under the *Act*. A Land Use Permit may be required for roads where access restrictions are applied.

Regulator	Permit/Act	Corresponding Applicability to the Project
MNRF(Cont'd)	*Far North Act* (2010)	Amendments to the *Far North Act* were approved December 9, 2021. Amendments include the removal of Section 12 (Development if no community-based land use plan). The Project will not require a Lieutenant Governor In Council Order or Minister's Order under the *Far North Act* before proceeding. CBLUPs have not yet been finalized for the area where corridor alternatives for the Project are proposed. Marten Falls First Nation (MFFN) and Webequie First Nation (WFN) are currently developing Draft CBLUPs for this area and will ensure there are no conflicts between the Project and CBLUPs. Project components and activities that affect land use will be consistent with the approved CBLUPs.
	Aggregate Permit under *Aggregate Resources Act* (1990)	A Permit will be required to extract aggregate on all provincial Crown Land and on all private land in areas designated under the *Aggregate Resources Act.*
	Approval under *Lakes and Rivers Improvement Act (LRIA)*	Approval for bridges, culverts and causeways may be required where the *Public Lands Act* does not apply and the drainage area above the proposed site is greater than 5.0 km^2.
MECP	Research Authorization in Provincial Parks and Conservation Reserves, under the *Provincial Parks and Conservation Reserves Act (2006)*	For proposed research and field investigations (e.g., ecology, geotechnical, groundwater, surface water) in the Otoskwin/Attawapiskat River Provincial Park.
	Permit to Take Water (PTTW) or Environmental Activity and Sector Registration (EASR) under the *Ontario Water Resources Act* (1990)	Where Project construction requires water taking – pumping, draining, dewatering, wells. Takings up to 50,000 litres per day (L/d) require no permit/registration. Dependent upon meeting specific criteria (e.g., water source, purpose) of the Water Taking EASR Regulation – O. Reg. 63/16, some takings between 50,000 L/d and 400,000 L/d may qualify for registry (EASR), while other takings (e.g., associated with aggregate sites) may require a PTTW. Takings over 400,000 L/d require a PTTW.
	Authorization under the *Endangered Species Act, 2007*	Potential for corridor/road construction to have effects on listed species or habitat.
	Approval under the *Health Protection and Promotion Act (1990)*	Facilitates provision of potable water and on-site sewage treatment and disposal systems at temporary construction camp(s).

Regulator	Permit/Act	Corresponding Applicability to the Project
MECP (Cont'd)	Environmental Compliance Approval (ECA) under the *Environmental Protection Act* (1990)	Permits waste to be transported by haulers from the Project work site and permits emissions from on-site equipment. An ECA may be required for the discharge and treatment of wastewater generated from some water takings. An ECA will be required for aggregate wash water systems with capacity greater than 10,000 L/d. An ECA will be required for on-site sewage systems with a design capacity in excess of 10,000 L/d. An ECA will be required for activities related to noise and air effects resulting from aggregate extraction. An ECA may be required for waste disposal if the proponent establishes a waste disposal site for final disposal, or a transfer station to collect and store waste from other sites (with a volume no greater than 1,000 tonnes per day of waste for final disposal).
	Authorization under the *Provincial Parks and Conservation Reserves Act, 2006*	Authorizations for construction may be required for clearing of ROW, laydown areas, and related activities.
Ministry of Health	Permit to Construct – Sewage System under the *Building Code Act*	A district Health Unit permit will be required for on-site sewage systems with a design capacity of up to 10,000 L/d.
Ministry of Labour, Immigration, Training and Skills Development	*Occupational Health and Safety Act (1990)*	Notice of Project under Section 23(2).
Ministry of Tourism, Culture and Sports	*Ontario Heritage Act (1990):* Part III.1 (Standards and Guidelines for Conservation of Provincial Heritage Properties) Part VI (Archaeological Resources) Standards and Guidelines for Consultant Archaeologists	Letters for archaeological and other cultural heritage assessment(s) as part of environmental assessment and Ontario *Heritage Act* due diligence.

Part E: Potential Effects of the Project

Part E provides an overview of the potential effects of the Project. **Appendix F** summarizes the preliminary mitigation measures proposed for the construction and operations phases, in tabular format, by each component of the environment including physical, biological, health, socio-economic, cultural heritage resources, and Aboriginal and Treaty Rights and Interests. Additional mitigation measures will be included in Management Plans that will be developed prior to construction and operations. Proposed management plans are listed in **Section 25** (see **Table 25-1**).

20 Fish and Fish Habitat, Aquatic Species and Migratory Birds

This section provides a list of any changes that, as a result of the carrying out of the Project, may be caused to the following components of the environment that are within the legislative authority of Parliament:

- Fish and fish habitat as defined in Subsection 2(1) of the *Fisheries Act*;
- Aquatic species, as defined in Subsection 2(1) of the *Species at Risk Act* (marine plants); and
- Migratory birds, as defined in Subsection 2(1) of the *Migratory Birds Convention Act*, 1994.

20.1 Potential Changes to Fish and Fish Habitat Under the *Fisheries Act*

Subsection 2(1) of the *Fisheries Act* defines 'fish' as: (a) parts of fish, (b) shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans or marine animals, and (c) the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals.

The Project will provide year-round access to the areas in the Far North, which is likely to increase access to waterbodies for recreational use. This increased access to waterbodies for recreational use has the potential to result in an increase in angling pressure on fish populations, higher risk of the introduction of invasive aquatic species, parasites and disease, and the accidental release of contaminants to waterbodies.

20.1.1 Potential Effects

The following potential Project-related changes that may have effects on fish and fish habitat include:

Construction

- Physical loss or harmful destruction of fish habitat during construction (e.g., permanent loss underneath bridge piers or embankment roads);
- Physical change or harmful alteration of fish habitat through changes to shape of streambed, bank composition, vegetation community, and/or bank stability due to construction;
- Harmful disruption or reductions in habitat accessibility and/or increased habitat fragmentation for fish life processes due to crossing construction;
- Changes in fish and aquatic species (including SAR habitat) habitat due to water quality changes such as changes in temperature regime, flow regime, increased contaminants due to accidental releases, or changes to water quality as a result of erosion/sedimentation. This in turn may lead to changes in survival and reproductive success;

- Death of fish (including SAR), aquatic species, and/or eggs caused by increased turbidity, physical contact with construction materials and equipment, blasting operations, stranding during temporary isolations, and/or accidental releases of contaminants;
- Increased concentrations of contaminants in fish tissue;
- Increased recreational and sustenance angling pressure due to increased human access (fish and aquatic species mortality/injury);
- Increased access may lead to greater introductions of garbage and deleterious substances;
- Effects on fish and aquatic species from invasive aquatic life introduced via construction or by increased human access.

Operations

- Increased recreational and sustenance angling pressure due to increased human access (fish and aquatic species mortality/injury);
- Increased access may lead to greater introductions of garbage, litter, and deleterious substances; and
- Deposition of deleterious substances leading to impacts to fish habitat or mortality from vehicles utilizing the roadway and/or accidental releases of contaminants).

20.1.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on fish and fish habitat:

Construction

- Wherever possible, avoid any in-water or near-water work during the Ontario Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat (as appropriate depending on the species present, [DFO, 2013]). This mitigation measure will reduce the risk of the death of fish. If in-water work is required during this period, DFO and MNRF will be consulted well in advance to request an extension to the fisheries timing window. Depending on the sensitivity of the water body, time of year and the species present an extension may not be granted;
- Comply with the fish and fish habitat protection provisions of the *Fisheries Act* by incorporating measures to avoid:
  - Causing the death of fish; and
  - Harmful alteration, disruption or destruction of fish habitat in your work, undertaking or activity (GoC, 2019b);
- Minimize the footprint of in-water works, where practical to reduce loss and/or degradation of fish habitat;
- Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to fish habitat, where feasible;
- Avoid placing project infrastructure in specialized habitat of Lake Sturgeon (e.g., spawning/rearing habitat), where possible;
- Isolate in-water work locations, with erosion and sedimentation control measures implemented to reduce the risk of harmful alteration, destruction or disruption (HADD) of fish and fish habitat as well as reduce the risk of the death of fish;
- Retain an environmental monitor during in-water work as required;
- Maintain fish passage in all watercourses through the installation of culverts, bridges, and/or fish passage structures to reduce disruption to fish life cycles;
- Conduct pumping using a pump equipped with fish screens in accordance with DFO guidelines (2000);
- Maintain pre-disturbance flow and water levels in all watercourses wherever possible;

- Minimize clearing of riparian habitat to reduce habitat loss and/or degradation;
- Complete fish salvages in isolations prior to work taking place;
- Limit public access to watercourses from the roadway to discourage fishing pressure;
- Engage DFO and MECP to determine if the Project will require permits under the Fisheries Act or the ESA;
- Provide environmental awareness and orientations for personnel and contractors on site so they are aware of potential hazards. Include maps to show relevant attributes, such as fish habitat, SAR occurrences, no-go zones, limits of construction, etc. and providing information of fish species that may be present in certain areas;
- Construction activity specific Stop Work Protocols that allow for the temporary cessation of Project-related activities and account for site-specific species and observation conditions; and
- Specification of construction activities for which fish monitoring would be necessary and procedures for monitoring construction activities by a qualified person.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for fish and fish habitat, vegetation, spill prevention and response, waste management, erosion and sediment control, and site restoration to reduce the risk of the death of fish or the degradation and/or loss of fish habitat.

Operations

- Limit public access to watercourses from the roadway to discourage fishing pressure; and
- Enable waste management procedures for clean-up of deleterious materials.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for spill prevention and response and waste management to reduce the risk of the death of fish or the degradation and/or loss of fish habitat.

20.2 Potential Changes to Aquatic Species Under the *Species at Risk Act (*Marine Plants)

Subsection 2(1) of the *Species at Risk Act* defines ‘aquatic species’ as a wildlife species that is a fish, as defined in Section 2 of the *Fisheries Act*, or a marine plant, as defined in Section 47 of that Act.

There are no fish species protected under the *Species at Risk Act* that could be present in the study area. Lake Sturgeon (Southern Hudson Bay – James Bay Population) are present and currently listed as Special Concern hence not afforded any protections under the *Species at Risk Act*.

The Project is unlikely to lead to Project-related changes in the harvest of marine plants within the coastal waters of Canada as defined under Section 47 of the *Fisheries Act* and Section 2(1) of *The Species at Risk Act*. As such, no preliminary mitigation measures are proposed.

20.3 Potential Changes to Migratory Birds under the *Migratory Birds Convention Act,* 1994

Subsection 2(1) of the *Migratory Birds Convention Act*, 1994 defines ‘migratory bird’ as a migratory bird referred to in the Convention, and includes the sperm, eggs, embryos, tissue cultures and parts of the bird.

20.3.1 Potential Effects

The following potential Project-related changes that may have effects on birds and bird habitat regulated under the *Migratory Birds Convention Act* include:

Construction

- Permanent habitat loss directly through vegetation clearing required for road construction and ancillary features such as permanent access roads, aggregate extraction, turnaround locations, maintenance yards, and others. This includes loss of wetland habitat, upland habitat, forested habitat, and eskers, all which may contain different assemblages of migratory birds. Species that utilize upland esker areas, such as nightjars, raptors, and upland songbirds might be more affected if esker habitats are preferred for the route;
- Temporary habitat loss or restriction due to construction/placement of ancillary infrastructure (e.g., laydown areas, camps, temporary access, roads);
- Habitat degradation caused by alterations of hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), habitat connectivity, and habitat fragmentation. This in turn may lead to changes in survival and reproductive success;
- Death of birds or reduction in habitat quality as a result of accidental releases of contaminants;
- Sensory disturbance related to proximity (noise) impacts from construction equipment, roadway traffic, which can affect habitat suitability and use. More sensitive bird species may avoid areas with high noise temporarily or permanently; and
- Death of birds and/or eggs, including SAR and/or traditional use birds, as a result of construction (vegetation clearing) or vehicle collision.

Operations

- Habitat degradation caused by alterations of hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), habitat connectivity, and habitat fragmentation. This in turn may lead to changes in survival and reproductive success;
- Death of birds or reduction in habitat quality as a result of accidental releases of contaminants;
- Sensory disturbance related to proximity (noise and/or light) impacts from maintenance equipment, roadway traffic, and lighted areas which can affect habitat suitability and use. More sensitive bird species may avoid areas with high noise temporarily or permanently;
- Death of birds and/or eggs, including SAR and/or traditional use birds, as a result of vehicle collision;
- Attraction of bird species to the road corridor (e.g., food waste, light causing insect attraction) which can affect predator-prey relationships and thus bird survival and reproduction; and
- Increased harvest of wildlife, including SAR by humans for recreational or traditional use due to increased public access.

Project activities have the potential to adversely affect migratory birds, as defined under the *Migratory Birds Convention Act* (MBCA). The greatest potential impact on migratory birds would occur if vegetation clearing activities were conducted during the nesting period for birds for nesting zone C6 (ECCC, 2018). This is the period when the percent of total nesting species is greater than 10% and occurs between April 21 and August 14 in the Project area, although nesting also occurs infrequently outside of this period.

20.3.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on migratory birds:

Construction

- Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to rare habitats (such as habitat loss and degradation along eskers), where feasible;
- Avoid any vegetation clearing between April 21 and August 14, within the nesting period for nesting zone C6 to reduce the risk of bird death. Migratory birds are most likely to be nesting in this timeframe and are at greatest risk of direct impacts. If vegetation clearing is required during this period, an avian biologist will be retained to conduct a survey for nesting activities/behaviors to manage risks to active nests protected by the MBCA;
- Establish setbacks around sensitive species and/or habitat features during construction to reduce the risk of bird death or nest abandonment.;
- Manage vegetation along the roadway to reduce the risk of birds nesting along the corridor and reduce the risk of bird death;
- Establish reduced speed limits and signage in areas where collisions with avian species are most likely to reduce the risk of bird death;
- Implement noise and light abatement measures to control operational sensory disturbances;
- Develop a protocol to manage attractant waste to reduce attracting birds and causing bird death; and
- Acquire permits as required from provincial and federal regulators.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices, for wildlife, vegetation, noise, spill prevention and response, waste management, traffic, and site restoration including temporary access roads, construction camps and laydown areas to reduce the potential for death of birds, habitat loss, and habitat degradation.

Operations

- Avoid any vegetation clearing between April 21 and August 14, within the nesting period for nesting zone C6. Migratory birds are most likely to be nesting in this timeframe and are at greatest risk of direct impacts. If vegetation clearing is required during this period, an avian biologist will be retained to conduct a survey for nesting activities/behaviors to manage risks to active nests protected by the MBCA;
- Establish setbacks around sensitive species and/or habitat features during construction;
- Manage vegetation along the roadway to reduce the risk of birds nesting along the corridor;
- Establish reduced speed limits and signage in areas where collisions with avian species are most likely;
- Develop a protocol to manage attractant waste;
- Implement noise and light abatement measures to control operational sensory disturbances; and
- Acquire permits as required from provincial and federal regulators.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices, for wildlife, vegetation, noise, spill prevention and response, waste management, traffic, and site restoration.

21 Federal Lands, Other Provinces and Outside of Canada

The Project will not occur on federal lands and as a result no known changes to the environment on federal lands are anticipated. The Project will not cause changes to the environment in either a province other than Ontario or outside of Canada.

22 Indigenous Physical and Cultural Heritage, Current Use of Lands and Resources for Traditional Purposes, and Archaeological Resources

This section provides a brief description of any impact, with respect to Indigenous peoples that, as a result of the carrying out of the Project, may occur and result from any change to the environment – on:

- Physical and cultural heritage;
- Current use of lands and resources for traditional purposes; and
- Any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.

For the purposes of the Project, the discussion of Indigenous physical and cultural heritage, traditional land and resource use, and archaeological resources is organized as following:

- Cultural heritage resources, which comprises:
  - Physical and cultural heritage; and
  - Any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.
- ATRI, which comprises:
  - Current use of lands and resources for traditional purposes (discussed as ILRU); and
  - Cultural continuity and well-being.

22.1 Cultural Heritage Resources

22.1.1 Potential Effects

The following potential effects may result from the Project on identified cultural heritage resources:

Construction

- Disturbance, damage, or loss of, registered or known archaeological sites, burial sites and sacred sites;
- Disturbance, damage, or loss of, built heritage resources; and
- Disruption of cultural heritage landscapes by introduction of physical, visual, audible or atmospheric elements that are not in keeping with the character and setting of cultural heritage resources.

Operations

- Disruption of cultural heritage landscapes by introduction of physical, visual, audible or atmospheric elements that are not in keeping with the character and setting of cultural heritage resources.

22.1.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on cultural heritage resources:

Construction

- Establish setbacks around identified cultural heritage resources; and
- Monitoring of areas of archaeological potential during construction to identify archaeological deposits if present.

A Cultural Heritage Baseline Study and Preliminary Impact Assessment will be carried out for the Project. Built heritage resources and cultural heritage landscapes will be identified through a review of existing published data and consultation with Indigenous Communities and other stakeholders and agencies. The Cultural Heritage Baseline Study and Impact Assessment will identify and describe potential project-specific impacts to the known and potential archaeological, built heritage resources, and cultural heritage landscapes, and will recommend measures to avoid or mitigate potential negative impacts. The proposed mitigation will inform the next steps of project planning and design.

The Cultural Heritage Baseline Study and Preliminary Impact Assessment for the Project will include a Stage 1 Archaeological Assessment. Should results of the Stage 1 Archaeological Assessment confirm archaeological potential within the corridor of the preferred alternative route, a Stage 2 Archaeological Assessment would be completed as early as possible before detailed Project design is completed. The results of the Stage 2 Archaeological Assessment would inform the need for further archaeological investigations where the effects to identified archaeological resources cannot be avoided through detail design. The Stage 2 report would include recommendations for management of archaeological resources that can be avoided, as well as recommendations for a process for dealing with incidental finds.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices, for cultural heritage resources, including a protocol for chance finds.

Operations

Mitigation measures during operations for cultural heritage resources are partially anticipated to be linked to mitigation measures for the Aboriginal and Treaty Rights and Interests.

In addition, an Aboriginal Rights and Interests Impact Management Plan will be developed, specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous Communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects listed.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices, for cultural heritage resources, including a noise management plan.

22.2 Aboriginal and Treaty Rights and Interests

This section provides a brief description of the information to be collected respecting ILRU and Cultural Continuity and well-being, and a suggested approach to assessing potential impacts to ATRI including mitigation to minimize the potential direct and indirect effects of the Project.

22.2.1 Potential Effects

Indigenous Land and Resource Use

Construction

Potential direct effects to ILRU that may result from the Project may include but are not limited to:

- Project-related alteration/change to or loss of sites and areas used for rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, teaching) can interfere with ILRU;
- Project-related disturbance to or loss of natural resources used for rights-based activities and other interests can interfere with ILRU;
- Project-related activities that have the potential to impact perceived confidence in the quality of natural resources used for rights-based activities and other interests can interfere with ILRU; and
- Project-related activities that have the potential to impact access to sites and areas for rights-based activities and other interests can interfere with ILRU.

In addition, potential indirect effects on ILRU may include but not be limited to:

- Changes in the rights-based economy related to changes in the pursuit of traditional activities that are monetized (e.g., trapping);
- Increased economic burden on Indigenous communities related to changes in the pursuit and consumption of country foods and associated increased reliance on market foods;
- Changes in the atmospheric environment (air quality) and or sensory disturbance (noise, vibration) related to construction could affect the availability and/or quality (or perceived quality) of resources that are harvested or gathered;
- Changes in surface and/or groundwater quality and/or quantity could affect the availability and/or quality (or perceived quality) of resources that are harvested or gathered and/or affect culturally significant species;
- Vegetation clearing/management associated with the construction phase could result in a loss of habitat for species that are harvested or gathered and/or culturally significant species;
- An increase in hunting or fishing pressure by non-Indigenous people accessing the area could affect the availability of wildlife and fish that are harvested by Indigenous community members;
- Changes in the atmospheric environment (air quality) and/or sensory disturbance (noise, vibration) related to the construction phase could affect the Indigenous experience of being on the land;
- Changes in the visual landscape related to the construction phase could affect the Indigenous experience of being on the land;
- Changes or effects to archaeological sites and resources, built heritage resources, and/or cultural heritage landscapes could affect the Indigenous experience of being on the land and/or the pursuit and teaching of rights-based activities and cultural practices; and
- The effect of accidental releases on the availability and/or quality (or perceived quality) of resources that are harvested or gathered and/or affect culturally significant species during the construction phase.

Operations

Potential direct effects to ILRU that may result from the Project may include but are not limited to:

- Project-related alteration/change to or loss of sites and areas used for rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, teaching) can interfere with ILRU;
- Project-related disturbance to or loss of natural resources used for rights-based activities and other interests can interfere with ILRU;
- Project-related activities that have the potential to impact perceived confidence in the quality of natural resources used for rights-based activities and other interests can interfere with ILRU; and

- Project-related activities that have the potential to impact access to sites and areas for rights-based activities and other interests can interfere with ILRU.

In addition, potential indirect effects on ILRU during the operations phase may include but not be limited to:

- Changes in the rights-based economy related to changes in the pursuit of traditional activities that are monetized (e.g., trapping);
- Increased economic burden on Indigenous Communities related to changes in the pursuit and consumption of country foods and associated increased reliance on market foods;
- Changes in the atmospheric environment (air quality) and or sensory disturbance (noise, vibration) related to operation could affect the availability and/or quality (or perceived quality) of resources that are harvested or gathered;
- Changes in surface and/or groundwater quality and/or quantity could affect the availability and/or quality (or perceived quality) of resources that are harvested or gathered and/or affect culturally significant species;
- Vegetation clearing/management associated with the operations phase could result in a loss of habitat for species that are harvested or gathered and/or culturally significant species;
- An increase in hunting or fishing pressure by non-Indigenous people accessing the area could affect the availability of wildlife and fish that are harvested by Indigenous community members;
- Changes in the atmospheric environment (air quality) and/or sensory disturbance (noise, vibration) related to the operations phase could affect the Indigenous experience of being on the land;
- Changes in the visual landscape related to the operations phase could affect the Indigenous experience of being on the land;
- Changes or effects to archaeological sites and resources, built heritage resources, and/or cultural heritage landscapes could affect the Indigenous experience of being on the land and/or the pursuit and teaching of rights-based activities and cultural practices; and
- The effect of accidental releases on the availability and/or quality (or perceived quality) of resources that are harvested or gathered and/or affect culturally significant species during the operations phase.

Cultural Continuity and Well-being

Construction

The following potential direct effects may result from the Project on cultural continuity and well-being:

- Project-related disturbance to or loss of culturally important sites and areas (e.g., ceremonial sites, place names, teaching sites, archaeological sites) can interfere with cultural continuity and well-being (the ability to practice and transmit cultural traditions such as activities and teaching);
- Project-related alteration/change to sufficient availability or loss of access to culturally significant sites and areas (e.g., ceremonial sites, place names, teaching sites, important harvesting sites and areas) and resources (e.g., culturally significant species) can interfere with cultural continuity and well-being;
- Project-related alteration/change to safe access to travel routes for practicing of rights within the cultural landscapes can interfere with cultural continuity and well-being;
- Project-related activities which can potentially increase access by non-Indigenous people to sites and areas that were previously perceived as having a sense of remoteness (and an experience of being on the land free from disturbance) including the perception of availability and fragmentation of land for rights-based activities can interfere with cultural continuity and well-being; and
- Project-related activities that can potentially impact the continued practice of cultural traditions and way of life can interfere with cultural continuity and well-being.

In addition, potential indirect effects on cultural continuity and well-being may include but not be limited to:

- Changes in food security and the diet of Indigenous community members and associated potential effects on human health related to a decrease in country food consumption/increase in market food consumption;
- Changes to family economics related to changes in the pursuit and consumption of country foods, as well as access (financial and logistical) to market foods and other essentials;
- Changes in community well-being (e.g., social issues, family relationships, community cohesion) related to changes in access to family members and friends, as well as services outside the community;
- Changes in the ability of community members to protect and maintain the Indigenous culture through teaching and the transfer of cultural knowledge to others, and protection and proliferation of the Indigenous language;
- Changes in community well-being could affect the pursuit and teaching of rights-based activities and cultural practices;
- Changes in human health could affect the pursuit and teaching of traditional activities and cultural practices, as well as experiences on the land;
- Changes in the social and economic environment could affect mental and psychological health and could affect outlook of the future (restrictions and/or opportunities); and
- Changes or effects on archaeological sites and resources, built heritage resources, and/or cultural heritage landscapes could affect the Indigenous experience of being on the land and/or the pursuit and teaching of rights-based activities and cultural practices.
- The effect of accidental releases on the availability and/or quality (or perceived quality) of access to culturally important sites and areas during the construction phase.

Operations

The following potential direct effects may result from the Project on cultural continuity and well-being:

- Project-related disturbance to or loss of culturally important sites and areas (e.g., ceremonial sites, place names, teaching sites, archaeological sites) can interfere with cultural continuity and well-being (the ability to practice and transmit cultural traditions such as activities and teaching);
- Project-related alteration/change to sufficient availability or loss of access to culturally significant sites and areas (e.g., ceremonial sites, place names, teaching sites, important harvesting sites and areas) and resources (e.g., culturally significant species) can interfere with cultural continuity and well-being;
- Project-related alteration/change to safe access to travel routes for practicing of rights within the cultural landscapes can interfere with cultural continuity and well-being;
- Project-related activities which can potentially increase access by non-Indigenous people to sites and areas that were previously perceived as having a sense of remoteness (and an experience of being on the land free from disturbance) including the perception of availability and fragmentation of land for rights-based activities can interfere with cultural continuity and well-being; and
- Project-related activities that can potentially impact the continued practice of cultural traditions and way of life can interfere with cultural continuity and well-being.

In addition, potential indirect effects on cultural continuity and well-being during the operations phase may include but not be limited to:

- Changes in food security and the diet of Indigenous community members and associated potential effects on human health related to a decrease in country food consumption/increase in market food consumption;
- Changes to family economics related to changes in the pursuit and consumption of country foods, as well as access (financial and logistical) to market foods and other essentials;

- Changes in community well-being (e.g., social issues, family relationships, community cohesion) related to changes in access to family members and friends, as well as services outside the community;
- Changes in the ability of community members to protect and maintain the Indigenous culture through teaching and the transfer of cultural knowledge to others, and protection and proliferation of the Indigenous language;
- Changes in community well-being could affect the pursuit and teaching of rights-based activities and cultural practices;
- Changes in human health could affect the pursuit and teaching of traditional activities and cultural practices, as well as experiences on the land;
- Changes in the social and economic environment could affect mental and psychological health and could affect outlook of the future (restrictions and/or opportunities);
- Changes or effects on archaeological sites and resources, built heritage resources, and/or cultural heritage landscapes could affect the Indigenous experience of being on the land and/or the pursuit and teaching of rights-based activities and cultural practices; and
- The effect of accidental releases on the availability and/or quality (or perceived quality) of access to culturally important sites and areas during the operations phase.

The approach to addressing the pathway of potential direct and indirect effects for assessing ILRU and cultural continuity and well-being is multi-disciplinary. As such, the potential for impacts to ATRI rely on assessing the physical and biological components that are inter-related (e.g., caribou and other species identified by Indigenous communities) in coordination with health, social, and economic components in determining the potential for impacts to Indigenous use of land and resources and cultural continuity and well-being as a result of the Project.

22.2.2 Preliminary Proposed Mitigation

Indigenous Land and Resource Use

Construction

Mitigation measures for ILRU are partially anticipated to be linked to mitigation measures for other disciplines, as outlined in **Sections 20**, **23**, and **24**. In addition to the mitigation measures outlined in those sections, the proponent will engage with Indigenous communities and organizations to develop an Aboriginal Rights and Interests Impact Management Plan specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects to rights-based activities and other interests.

The Aboriginal Rights and Interests Impact Management Plan will further describe cross-cultural awareness training for staff and on-the-ground personnel, which will be developed in collaboration with participating Indigenous communities and groups. This training is expected to build awareness and reduce potential adverse interactions with Indigenous communities during construction.

Operations

Mitigation measures for ILRU are partially anticipated to be linked to mitigation measures for other disciplines, as outlined in **Sections 20**, **23**, and **24**. In addition to the mitigation measures outlined in those sections, the proponent will engage with Indigenous communities and organizations to develop an Aboriginal Rights and Interests Impact Management Plan specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects to rights-based activities and other interests.

The Aboriginal Rights and Interests Impact Management Plan will further describe cross-cultural awareness training for staff and on-the-ground personnel, which will be developed in collaboration with participating Indigenous communities and groups. This training is expected to build awareness and reduce potential adverse interactions with Indigenous communities during operations.

Cultural Continuity and Well-being

Construction

Mitigation measures for cultural continuity and well-being are partially anticipated to be linked to mitigation measures for other disciplines, as outlined in **Sections 20**, **23**, and **24**. In addition to the mitigation measures outlined in those sections, the proponent will engage with Indigenous communities and organizations to develop an Aboriginal Rights and Interests Impact Management Plan specific to the rights and interests-based activities of participating Indigenous communities pertaining to cultural continuity and community well-being. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects to cultural and interests-based activities.

The Aboriginal Rights and Interests Impact Management Plan will further describe cross-cultural awareness training for staff and on-the-ground personnel, which will be developed in collaboration with participating Indigenous communities and groups where applicable. This training is expected to build awareness and reduce potential adverse interactions with Indigenous communities during construction.

Operations

Mitigation measures for cultural continuity and well-being are partially anticipated to be linked to mitigation measures for other disciplines, as outlined in **Sections 20**, **23**, and **24**. In addition to the mitigation measures outlined in those sections, the proponent will engage with participating Indigenous communities and organizations to develop an Aboriginal Rights and Interests Impact Management Plan specific to the rights and interests-based activities of participating Indigenous communities pertaining to cultural continuity and community well-being. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects to cultural and interests-based activities.

The Aboriginal Rights and Interests Impact Management Plan will further describe cross-cultural awareness training for staff and on-the-ground personnel, which will be developed in collaboration with participating Indigenous communities and groups where applicable. This training is expected to build awareness and reduce potential adverse interactions with Indigenous communities during operations.

23 Indigenous Health, Social and Economic Conditions

This section provides a brief description of any change that, as a result of the carrying out of the Project, may occur to the health, social or economic conditions of Indigenous peoples, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples.

23.1 Human Health

23.1.1 Potential Effects

The following potential effects on Indigenous health may result from Project-related changes to other components of the environment that may influence human health such as noise, air quality, surface water, geology, terrain and soils, and changes to country foods.

Construction

- Changes in local air quality due to road construction and operation may affect human health;
- Changes in local drinking water quality due to road construction and operation may affect human health;
- Changes in local soil quality due to road construction and operation may affect human health; and
- Changes to contaminant levels in harvested country food items due to road construction and operation may affect human health.

Operations

- Changes in local air quality due to road construction and operation may affect human health;
- Changes in local drinking water quality due to road construction and operation may affect human health;
- Changes in local soil quality due to road construction and operation may affect human health; and
- Changes to contaminant levels in harvested country food items due to road construction and operation may affect human health.

23.1.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on human health. Mitigation measures for human health are largely anticipated to be linked to mitigation measures for other disciplines, particularly those that are assessing air, soil and water quality.

Construction

- Recommended air quality mitigation measures;
- Recommended soil quality mitigation measures; and
- Recommended water quality mitigation measures.

Should mitigation for human health be necessary, collaboration with these other disciplines would be required in order to determine appropriate and practical mitigation measures. Mitigation measures for human health are partially anticipated to be linked to mitigation measures for Aboriginal Treaty Rights and Interests, and the socio-economic environment.

An Aboriginal Rights and Interests Impact Management Plan will be developed, specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects listed.

Operations

- Recommended air quality mitigation measures;
- Recommended soil quality mitigation measures; and
- Recommended water quality mitigation measures.

Should mitigation for human health be necessary, collaboration with these other disciplines would be required in order to determine appropriate and practical mitigation measures. Mitigation measures for human health are partially anticipated to be linked to mitigation measures for Aboriginal Treaty Rights and Interests, and the socio-economic environment.

An Aboriginal Rights and Interests Impact Management Plan will be developed specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects listed.

Other potential human health mitigation measures could also be implemented, if determined to be necessary based on the outcomes of the assessments of Project effects on other components of the environment that may influence human health. Such measures would likely involve standard risk management measures relating to emission exposure reduction or prevention, which could include a range of potential engineering and administrative controls.

23.2 Socio-Economic Environment

23.2.1 Potential Effects

Regional and Local Economy

The following potential effects on the regional and local economy may result from the Project.

Construction

- Changes in labour force participation and unemployment;
- Changes to training and education programs;
- Changes in income levels;
- Changes in living costs including prices of goods;
- Changes in municipal government revenues and costs; and
- Changes to area (ha) of significant aggregate deposits.

Operations

- Changes in labour force participation and unemployment;
- Changes to training and education programs;
- Changes in income levels;
- Changes in living costs including prices of goods;
- Changes in municipal government revenues and costs; and
- Changes to area (ha) of significant aggregate deposits.

Community Services and Infrastructure

The following potential effects on the community services and infrastructure may result from the Project.

Construction

- Changes in demand for accommodations and affordability;
- Changes in demand on health care services;
- Changes in demand on major roads and highway infrastructure; and
- Changes in demand on airports.

Operations

- Changes in demand for accommodations and affordability;
- Changes in demand on health care services;
- Changes in demand on major roads and highway infrastructure; and
- Changes in demand on airports.

Land Use and Recreation

The following potential effects on land use and recreation may result from the Project.

Construction

- Changes in outdoor recreation use; and
- Changes to number and area (ha) of Provincial Parks, ANSI, and Conservation Reserves affected.

Operations

- Changes in outdoor recreation use; and
- Changes to number and area (ha) of Provincial Parks, ANSI, and Conservation Reserves affected.

Community Safety

The following potential effects on community safety may result from the Project.

Construction

- Changes to participation in social and/or cultural events;
- Changes in crime rates;
- Changes in rates of domestic violence, sexual and physical assault; and
- Changes in levels of substance use (e.g., drugs, alcohol).

Operations

- Changes in crime rates;
- Changes in rates of domestic violence, sexual and physical assault; and
- Changes in levels of substance use (e.g., drugs, alcohol).

23.2.2 Preliminary Proposed Mitigation

Regional and Local Economy

The following preliminary mitigation measures are proposed to reduce the potential effects on regional and local economy.

Construction

- Implement skills inventory, training and skills development workshops within local communities; and
- Education, training and hiring practices to encourage the employment of local workers, utilizing the Northern Ontario network of Indigenous Training Organizations such as the Indigenous Skills and Employment Training network.

Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.

Operations

- Implement skills inventory, training and skills development workshops within local communities; and
- Education, training and hiring practices to encourage the employment of local workers, utilizing the Northern Ontario network of Indigenous Training Organizations such as the Indigenous Skills and Employment Training network.

Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.

Community Services and Infrastructure

The following preliminary mitigation measures are proposed to reduce the potential effects on community services and infrastructure.

Construction

- Work with local government authorities and health and emergency service organizations to plan for anticipated changes in population and service demand from the Project.

Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.

Operations

- Work with local government authorities and health and emergency service organizations to plan for anticipated changes in population and service demand from the Project.

Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.

Land Use and Recreation

The following preliminary mitigation measures are proposed to reduce the potential effects on land use and recreation.

Construction

- Work with government authorities, local communities and business owners to develop local and regional strategy that addresses changes to outdoor recreation use.

Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.

Operations

- Work with government authorities, local communities and business owners to develop local and regional strategy that addresses changes to outdoor recreation use.

Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.

Community Safety

The following preliminary mitigation measures are proposed to reduce the potential effects on community safety.

Construction

› Engagement with local communities, government entities and local organizations to implement better access to health and addiction services, and the improvement of relationships between justice sector professionals (local police and Indigenous Peoples) to strengthen community-based policing in local communities.

Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.

Operations

› Engagement with local communities, government entities and local organizations to implement better access to health and addiction services, and the improvement of relationships between justice sector professionals (local police and Indigenous Peoples) to strengthen community-based policing in local communities.

Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.

24 Potential Effects of the Project on Other Components of the Environment

This section provides a list of any changes that, as a result of the carrying out of the Project, may be caused on physical and biological components of the environment other than those discussed on **Sections 20**, **21**, **22** and **23**.

24.1 Air Quality

24.1.1 Potential Effects

The following potential effects on air quality may be anticipated.

Construction

› Changes to local air quality during the construction phase due to fugitive dust from land clearing, material handling, and vehicles travelling on gravel roads and other exposed surfaces, and due to tailpipe emissions (e.g., NOx and CO) from the movement and operation of construction equipment and vehicles.

Operations

› Changes to local air quality during the operations phase due to vehicular traffic, and equipment and vehicles used for operation and maintenance activities. Vehicular exhaust emissions will consist primarily of NOx, CO, SO2, suspended particulates, and volatile organic compounds, as well as GHG gases.

Dispersion modelling will be conducted to assess Project effects. Modelling will be conducted following published guidance, as applicable. The models to be selected for use in this assessment will be ideally suited for near-field effects (i.e., on the scale of metres to less than 50 kilometres). Construction and operation activities (e.g., use of the road) will be the sources of emissions from the Project. These sources will generate emissions in the vicinity of the Project. Emissions will disperse rapidly with downwind distance.

24.1.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on air quality.

Construction

› During construction activities: engine idling policy; use of efficient, lower emission vehicles and equipment where practical; limit vehicle speeds; and maintain construction equipment in proper working condition according to manufacturer's specifications; and
› Wet or cover storage piles and exposed surfaces to reduce fugitive dust emissions and wet road surfaces during dry periods.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices, for air quality, dust control and blasting during construction activities.

Operations

- During operation and maintenance activities: engine idling policy; use of efficient, lower emission vehicles and equipment where practical; limit vehicle speeds; and maintain construction equipment in proper working condition according to manufacturer's specifications; and
- Wet or cover storage piles and exposed surfaces to reduce fugitive dust emissions and wet road surfaces during dry periods.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices, for air quality, dust control and blasting during operation and maintenance activities.

24.2 Greenhouse Gases

24.2.1 Potential Effects

The following potential effects on GHG emissions are anticipated.

Construction

- Increase in GHG emissions as result of construction activities and land use changes.

Operations

- Increase in GHG emissions as result of operation and maintenance activities and land use changes.

Releases of GHGs and their accumulation in the atmosphere will contribute to provincial and national GHG emissions totals. Anticipated Project GHG emissions will be quantified and compared against sectoral and federal totals. Emissions will be calculated using the following guidance and emission factor resources:

- ECCC's Greenhouse Gas Reporting Program;
- USE EPA AP-42: Compilation of Air Emissions Factors (US EPA, 2021); and
- ECCC's National Inventory Report (ECCC, 2020b).

GHG sinks such as forest sequestration along the proposed development will also be considered in total GHG emissions quantification. The Greenhouse Gas assessment will quantify the net impact on GHG emissions as a result of land use changes within the Project area. This assessment will include consideration of the addition or removal of any carbon sources or sinks and will evaluate the impact over the life of the Project. The resulting changes in GHG emissions and carbon capture capacity will be estimated in the assessment of Project effects on GHG emissions.

24.2.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on GHG emissions.

Construction

- Minimize the project footprint, especially in peatlands, through route alternative evaluation and design/construction techniques;
- Utilize Best Management Practices for construction equipment, which may include:
  - Minimization of idling time by shutting equipment off when not in use;
  - Reducing idling times;
  - Maintaining equipment in proper working condition according to manufacturer's specifications; and
  - Use of speed limits.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for air quality.

Operations

› Minimize the project footprint, especially in peatlands, through route alternative evaluation and design/construction techniques;
› Utilize Best Management Practices for maintenance equipment, which may include:

- Minimization of idling time by shutting equipment off when not in use;
- Reducing idling times;
- Maintaining equipment in proper working condition according to manufacturer's specifications; and
- Use of speed limits.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for air quality.

24.3 Noise

24.3.1 Potential Effects

The following potential effects on noise may be anticipated.

Construction

› Increase in ambient noise levels and ground vibration due to construction activities.

Operations

› Increase in ambient noise levels and ground vibration due to operation and maintenance activities.

Quantitative noise impact assessments will be undertaken for the preferred corridor for both the construction and operations phases.

For the construction phase, given its expected multi-year duration, a quantitative assessment of noise impact will be completed. Details of the construction phase, including (but not limited to), laydown areas, types and counts of noise generating equipment, equipment noise levels, construction schedule and duration will be used to predict noise levels at key points of reception (PORs). The noise predictions will be established through noise propagation modelling (based on ISO 9613 Parts 1 and 2).

For the operations phase, an assessment of traffic noise impact will be completed in accordance with the applicable provincial guidelines (i.e., MTO and MECP guidelines). Relevant information, including predicted traffic volumes, percentages of medium and heavy trucks, posted speed limit, type of road surface and topography (PORs in relation to the proposed route) will be used in Ministry-accepted traffic noise model (e.g., U.S. DOT's TNM v2.5) in order to predict the traffic noise impact at key representative PORs.

24.3.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on sounds levels.

Construction

› Utilize Best Management Practices, which may include: use of newer and quieter construction equipment; avoid co-occurrence of construction activities with significant noise impact; ensure stationary sources (e.g., diesel generators) are enclosed and equipped with acoustic treatment on exhaust and intake; and avoid activities with significant noise impact during nighttime hours;

- Develop a noise complaint assessment procedure during construction;
- Develop a protocol for community notification of activities with significant noise impact (e.g., blasting) during construction and maintenance activities; and
- Implement permanent noise mitigation features such as earth berms to eliminate the direct line of sight between the source (road) and receptor areas for locations where noise impact is determined to be significant, if applicable.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for noise during construction.

Operations

- Implement permanent operational mitigation measures such as reduced speed limit along the segments of the road where noise impact is determined to be significant; and
- Implement permanent noise mitigation features such as earth berms to eliminate the direct line of sight between the source (road) and receptor areas for locations where noise impact is determined to be significant, if applicable.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for noise during operations.

24.4 Groundwater

24.4.1 Potential Effects

The following potential effects on groundwater may be anticipated.

Construction

- Vegetation clearing, site grading and stockpiling along the road corridor and temporary/permanent access roads, and at the construction camps, laydown areas and aggregate sites, may affect groundwater quantity, quality, and flow;
- The hardening of the ground surface as a result of the construction of the roads and supportive infrastructure including construction camps and laydown/storage yards, has the potential of reducing groundwater recharge rates, lowering groundwater levels, and changing natural groundwater flow patterns;
- Short-term dewatering during the construction of the foundations of the roads and structures (including bridges and culverts), the production of aggregates at the pits and quarries, and the water taking/pumping of groundwater from water supply wells at the construction camps can cause temporary decrease in groundwater tables and reduction of baseflow contributions to nearby groundwater dependent features (i.e., wetlands, streams, springs, and water supply wells, if any), especially within the dewatering zone of influence; and
- Groundwater quality has the potential to be affected accidental releases during construction.

Operations

- The operation of the pits and quarries and the associated aggregate production and dewatering may affect groundwater quantity, quality, and flow;
- The continuing use of the roads may further reduce the groundwater infiltration rate and thus the groundwater recharge; and
- The use of de-icing substances and accidental releases from machines and vehicles may affect local groundwater quality.

24.4.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on groundwater.

Construction

- Minimize the project footprint and barrier effects, especially in wetlands/peatlands, through route alternative evaluation and design/construction techniques;
- Avoid using potential acid generating rocks and soils as road construction materials; and
- Dewatering activities should, at a minimum, follow the Ontario Provincial Standard Specification (OPSS) 517 – Dewatering of Pipeline, Utility, and Associated Structure Excavation and OPSS 518 Construction Specification for Control of Water from Dewatering Operations.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard/best management practices in the industry, for erosion and sediment control, dewatering, spill prevention and response, waste disposal and site restoration.

Operations

- Establish and maintain setbacks around waterbodies as needed;
- Maintain minimum flows in watercourses downstream of the isolated work areas and implement erosion and sediment controls for drainage and structural maintenance/repair works;
- Develop water quantity and quality monitoring plans, as needed to monitor the stream flow and water quality during the in-water works; and
- Minimize the use of de-icing substances.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard/best management practices in the industry, for erosion and sediment control, dewatering, spill prevention and response, waste disposal and site restoration.

24.5 Surface Water

24.5.1 Potential Effects

The following potential effects on surface water may be anticipated.

Construction

- Changes in water quantity and distribution due to changes in land cover type (e.g., peatlands to gravel surface), may increase or decrease runoff, thereby affecting downstream flows, water levels and erosion-sedimentation processes;
- Changes in water quantity and distribution due to the installation of temporary and permanent structures which may convey or obstruct flow (e.g., barrier effects), also affecting downstream flows, water levels and erosion-sedimentation processes;
- Changes in water quality due to construction activities which expose soil, increase rates of erosion and sedimentation;
- Changes in water quality due to accidental releases of contaminant substances from vehicles or other machinery used during construction; and
- Discharge from dewatering can potentially cause erosion and mobilization of sediment and thus reduction of the water quality of receiving waterbodies at the discharge point and along the downstream flow path, with elevated total suspended solids (TSS) or turbidity.

Operations

- Changes in water quantity and distribution due to changes in land cover type (e.g., peatlands to gravel surface), may increase or decrease runoff, thereby affecting downstream flows, water levels and erosion-sedimentation processes;
- Changes in water quantity and distribution due to the installation of permanent structures which may convey or obstruct flow (e.g., barrier effects), also affecting downstream flows, water levels and erosion-sedimentation processes;
- Changes in water quality due to maintenance activities which expose soil, increase rates of erosion and sedimentation; and
- Changes in water quality due to accidental releases of contaminant substances from vehicles or other machinery used during operation and or maintenance (e.g., road salt/de-icing).

Hydrological modelling will be conducted using approximative methodologies to determine flows and flow accumulation. This modelling can be used to approximate downstream water quantity and quality impacts, their magnitude and their spatial and temporal extents. Software-based modelling approaches will be used if greater precision is required; for instance, if warranted due to the magnitude of the effect.

24.5.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on surface water.

Construction

- Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to surface water;
- Establish setbacks around waterbodies as needed;
- Minimize disturbed areas where practical;
- Maintain minimum flows in watercourses via pumping or flumes and maintain flows downstream of isolations;
- Implement erosion and sediment controls for drainage and structural repair/maintenance work;
- If water withdrawal is necessary for the construction limit the drawdown rates such that impacts are avoided or reduced; and
- Develop water quality and quantity monitoring plans, as needed to monitor for flow and sediment events during in-water works.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices, for spill prevention and response, erosion and sediment control, surface water and stormwater, dewatering, and site restoration.

Operations

- Establish setbacks around waterbodies as needed;
- Minimize disturbed areas where practical;
- Maintain minimum flows in watercourses via pumping or flumes and maintain flows downstream of isolations;
- Implement erosion and sediment controls for drainage and structural repair/maintenance work;
- If water withdrawal is necessary for the construction limit the drawdown rates such that impacts are avoided or reduced; and
- Develop water quality and quantity monitoring plans, as needed to monitor for flow and sediment events during in-water works.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices, for spill prevention and response, erosion and sediment control, surface water and stormwater, dewatering, and site restoration.

24.6 Geology, Terrain and Soils

24.6.1 Potential Effects

The following potential effects on geology, terrain and soils may be anticipated.

Construction

- Changes to terrain (topography and surficial geology) due to site clearing, re-contouring, cut and fill requirements, aggregate extraction, overburden removal and other activities;
- Changes to the potential development of known mineral deposits in the area;
- Changes in soil quality due to compaction, rutting, admixing, and acid mine drainage or metal leaching during the construction phase;
- Changes in soil quality due to accidental releases of chemical or other hazardous materials during construction; and
- Changes in soil quality and quantity due to increased rates of erosion and sedimentation processes caused by soil exposure and stockpiling during the construction phase.

Operations

- Changes to terrain (topography and surficial geology) due to site clearing, re-contouring, cut and fill requirements, aggregate extraction, overburden removal and other activities;
- Changes to the potential development of known mineral deposits in the area;
- Changes in soil quality due to compaction, rutting, admixing, and spills of contaminating substances, and acid mine drainage or metal leaching during the construction and operations phases; and
- Changes in soil quality due to accidental releases of chemical or other hazardous materials during the operations phase.

24.6.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on geology, terrain and soils.

Construction

- Limit the footprint temporary infrastructure, including vehicle and heavy equipment access routes;
- Salvage onsite mineral topsoil, organic topsoil, woody debris, and subsoil for reclamation activities. Mineral topsoil, organic topsoil, woody debris, and subsoil should be stored separately, where practical;
- Implement the erosion and sediment control plan including short-term erosion control measures for soil stockpiles to conserve soil and avoid or reduce soil losses, and reduce sedimentation transport into nearby sensitive areas;
- Control and remove invasive species on disturbed areas and on soil stockpiles;
- Disturbed slopes should be contoured to angles that are safe and stable, compatible with adjacent landforms, and compatible with restoration goals;
- Strip topsoil and subsoil prior to construction, construct under frozen conditions, or use matting to reduce compaction, rutting and admixing;
- Develop protocol for equipment to arrive to site clean and free of debris; and

- Implement an acid rock drainage and metal leaching management plan to manage potentially acid generating rock and stockpiled material.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for spill prevention and response, erosion and sediment control, weeds and invasive species, blasting, and site restoration.

Operations

- Limit the footprint of temporary infrastructure, including vehicle and heavy equipment access routes;
- Manage onsite mineral topsoil, organic topsoil, woody debris, and subsoil for reclamation activities. Mineral topsoil, organic topsoil, woody debris, and subsoil should be stored separately, where practical;
- Implement the erosion and sediment control plan including operational erosion control measures for road surfaces and soil stockpiles to conserve soil and avoid or reduce soil losses, and reduce sedimentation transport into nearby sensitive areas;
- Control and remove invasive species on disturbed areas and on soil stockpiles; and
- Implement an acid rock drainage and metal leaching management plan to manage potentially acid generating rock and stockpiled material.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices spill prevention and response, erosion and sediment control, weeds and invasive species, blasting, and site restoration.

24.7 Visual Environment

24.7.1 Potential Effects

The following potential effects on the visual environment may be anticipated.

Construction

- Alteration of the existing undisturbed landscape and visual character during the construction phase; and
- Degradation of valued natural, cultural and Indigenous visual resources including sensitive sites and viewpoints.

Operations

- Alteration of the existing undisturbed landscape and visual character during the operations phases; and
- Degradation of valued natural, cultural and Indigenous visual resources including sensitive sites and viewpoints.

Visibility mapping will be prepared for the regional study area up to 8 km from the preferred corridor, to determine whether there will be views from sensitive receptor locations. The GIS based 3D landscape modelling tool Visual Nature Studio (VNS) will be used to create the visual simulation modelling and images to evaluate visual impact. Visibility mapping will use advanced tools, such as VNS, Esri (Environmental Systems Research Institute), ArcGIS Desktop/Pro and Spatial Analyst rule-based software, to build objective and data driven mapping that describes where the Project will be visible from. The visibility mapping will be a tool for assisting the Indigenous communities, stakeholders, and decision makers in understanding potential effects of the Project on the visual environment.

24.7.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on the visual environment.

Construction

- Retain buffers around sensitive receptors if needed; and
- Route the roadway to avoid sensitive receptors.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for site restoration.

Operations

- Retain buffers around sensitive receptors if needed; and
- Route the roadway to avoid sensitive receptors.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for site restoration.

24.8 Wildlife and Wildlife Habitat

24.8.1 Potential Effects

The following potential effects on wildlife and wildlife habitat may be anticipated.

Construction

- Habitat loss directly through vegetation clearing required for road construction, laydown areas, stockpiles, and excavations;
- Habitat degradation caused by alterations in hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), reductions in habitat connectivity, loss of travel corridors, and habitat fragmentation/habitat avoidance. This in turn may lead to changes in survival and reproductive success;
- Death of wildlife or reduction in habitat quality as a result of accidental releases of contaminants;
- Sensory disturbance related to proximity (noise and visual) impacts from construction equipment, which can affect habitat suitability and use is especially possible in species that are sensitive;
- Loss of wildlife and/or traditional use of wildlife, as a result of construction or vehicle collision; and
- Attraction of wildlife to construction camps or the road corridor (e.g., food waste, ease-of-use) which can affect predator-prey relationships and thus wildlife survival and reproduction.

Operations

- Death of wildlife or reduction in habitat quality as a result of accidental releases of contaminants;
- Sensory disturbance related to proximity (noise and visual) impacts from maintenance equipment, lighted areas, and roadway traffic, which can affect habitat suitability and use is especially possible in species that are noise and/or light sensitive;
- Loss of wildlife and/or traditional use of wildlife, as a result of vehicle collision;
- Attraction of wildlife to the road corridor (e.g., food waste, ease-of-use) which can affect predator-prey relationships and thus wildlife survival and reproduction;
- Increased beaver activity and impoundment along the roadway in ponded or culvert areas; and
- Increased harvest of wildlife by humans for recreational or traditional use due to increased public access.

24.8.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on wildlife and wildlife habitat.

Construction

- Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to sensitive habitats, where feasible;
- Avoid clearing vegetation during the roosting season to reduce impacts to bats;
- Minimize vegetation/habitat clearing as much as practical;
- Limit temporary infrastructure, including vehicle and heavy equipment access routes;
- Conduct reptile and amphibian rescues where habitat has been identified;
- Regrade and revegetate temporarily cleared areas;
- Install signage in areas where frequent wildlife crossings of the roadway are expected;
- Reduce speed limits in areas where wildlife interactions are expected;
- Manage vegetation along ditches to ensure good visibility for wildlife;
- Establish setbacks around sensitive and/or protected species and habitat features;
- Consider the installation of wildlife crossing structures to facilitate movement of wildlife over the roadway in areas of high wildlife concentrations. These would include different wildlife crossing structures for different wildlife taxa (e.g., amphibians, reptiles, mammals);
- Develop a protocol to manage attractant waste;
- Locate laydown and refueling areas away from waterbodies;
- Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution;
- Manage noise control using standard best management practices;
- Develop a protocol for beaver management to reduce the impacts of impoundment; and
- Acquire permits as required from provincial and federal regulators.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for wildlife, vegetation, noise and light, spill prevention and response, waste management, traffic, and site restoration.

Operations

- Minimize vegetation/habitat clearing as much as practical;
- Install signage in areas where frequent wildlife crossings of the roadway are expected;
- Reduce speed limits in areas where wildlife interactions are expected or are frequently observed;
- Manage vegetation along ditches to ensure good visibility for wildlife during appropriate seasons;
- Establish setbacks around sensitive and/or protected species and habitat features;
- Consider the installation of wildlife crossing structures to facilitate movement of wildlife over the roadway in areas of high wildlife concentrations. These would include different wildlife crossing structures for different wildlife taxa (e.g., amphibians, reptiles, mammals);
- Develop a protocol to manage attractant waste;
- Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution;
- Manage noise control using standard best management practices;
- Develop a protocol for beaver management to reduce the impacts of impoundment;
- Implement hunting and access restrictions, such as establishing traffic controls and barriers to access/secondary roadways; and
- Acquire permits as required from provincial and federal regulators.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices, for wildlife, vegetation, noise and light, spill prevention and response, waste management, traffic, and site restoration.

24.9 Birds and Bird Habitat

24.9.1 Potential Effects

The following potential effects on the birds and bird habitat may be anticipated.

Construction

- Habitat loss directly through vegetation clearing required for road construction, laydown areas, stockpiles, and excavations;
- Habitat degradation caused by alterations in hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), habitat connectivity, and habitat fragmentation. This in turn may lead to changes in survival and reproductive success;
- Death of birds or reduction in habitat quality as a result of accidental releases of contaminants;
- Sensory disturbance related to proximity (noise) impacts from construction equipment, which can affect habitat suitability and use. More sensitive bird species may avoid areas with high noise temporarily or permanently;
- Death of birds and/or eggs, including SAR and/or traditional use birds, as a result of construction (vegetation clearing) or vehicle collision; and
- Attraction of bird species to construction camps or the road corridor (e.g., food waste, light causing insect attraction) which can affect predator-prey relationships and thus bird survival and reproduction.

Operations

- Death of birds or reduction in habitat quality as a result of accidental releases of contaminants;
- Sensory disturbance related to proximity (noise and light) impacts from maintenance equipment, roadway traffic, and lighted areas, which can affect habitat suitability and use. More sensitive bird species may avoid areas with high noise temporarily or permanently;
- Death of birds and/or eggs, including SAR and/or traditional use birds, as a result of maintenance (vegetation clearing) or vehicle collision;
- Attraction of bird species to the road corridor (e.g., food waste, light causing insect attraction) which can affect predator-prey relationships and thus bird survival and reproduction; and
- Increased harvest of wildlife, including SAR by humans for recreational or traditional use due to increased public access.

24.9.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on birds and bird habitat.

Construction

- Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to sensitive habitats, where feasible;
- Avoid clearing of vegetation and other nesting habitat during the migratory bird nesting season;
- Conduct nest sweeps (with appropriate permitting) if clearing during the nesting season;
- Install signage in areas where frequent bird crossings (e.g., grouse) of the roadway are expected;

- Regrade and revegetate temporarily cleared areas;
- Limit temporary infrastructure, including vehicle and heavy equipment access routes;
- Develop a protocol to manage attractant waste;
- Establish setbacks around sensitive and/or protected species and habitat features (such as nests);
- Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution.
- Manage noise using standard best management practices; and
- Acquire permits as required from provincial and federal regulators if disturbance is required.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for wildlife, vegetation, spill prevention and response, waste management, and site restoration.

Operations

- Avoid clearing of vegetation and other nesting habitat during the migratory bird nesting season; Conduct nest sweeps (with appropriate permitting) if clearing during the nesting season;
- Install signage in areas where frequent bird crossings (e.g., grouse) of the roadway are expected;
- Develop a protocol to manage attractant waste;
- Establish setbacks around sensitive and/or protected species and habitat features (such as nests);
- Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution;
- Manage noise using standard best management practices;
- Implement hunting and access restrictions, such as establishing traffic controls and barriers to access/secondary roadways; and
- Acquire permits as required from provincial and federal regulators.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for wildlife, vegetation, spill prevention and response, waste management, and site restoration.

24.10 Plants and Vegetation Communities

24.10.1 Potential Effects

The following potential effects on plants and vegetation communities may be anticipated.

Construction

- Loss of plants or plant communities, including potential SAR and traditional use plants as a result of vegetation clearing for construction, stockpiling, excavation, and/or laydown areas;
- Loss of vegetation could reduce carbon sequestration capacity of carbon sinks;
- Changes to community species composition and diversity (increases or decreases in certain species with a community), due to construction, changes in local hydrology or water quality, dust and air emissions, changes to soil quality, and accidental releases of contaminants;
- Reduction in wetland habitat (including peatlands) or wetland quality/function due to construction, changes in local hydrology or water quality, dust and air emissions, changes to soil quality, and accidental releases;
- Reduction in esker landforms and esker vegetation community habitat;
- Introduction or proliferation of invasive plant species through construction, which may reduce the competitiveness of local plant species; and
- Reduced soil quantity during earthworks may affect revegetation and restoration success.

Operations

- Changes to community species composition and diversity (increases or decreases in certain species with a community), due to operation and maintenance, changes in local hydrology or water quality, dust and air emissions, changes to soil quality, and accidental releases of contaminants;
- Reduction in wetland habitat (including peatlands) or wetland quality/function due to operation and maintenance, changes in local hydrology or water quality, dust and air emissions, changes to soil quality, and accidental releases;
- Reduction in esker landforms and esker vegetation community habitat;
- Increased harvest of plants for recreational or traditional use due to increased public access;
- Introduction or proliferation of invasive plant species through increased access to the public, which may reduce the competitiveness of local plant species; and
- Reduced soil quantity during earth moving activities may affect revegetation and restoration success.

24.10.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on plants and vegetation communities.

Construction

- Minimize vegetation/habitat clearing as much as practical, especially in wetlands and riparian zones;
- Limit temporary infrastructure, including vehicle and heavy equipment access routes;
- Revegetate disturbed areas with native and/or non-invasive vegetation;
- Designate locations for temporary stockpiling of vegetation and soils;
- Provide information to construction workers and contractors on rare and sensitive habitat to be protected from disturbance located within and surrounding the site;
- Establish setbacks around sensitive and/or protected species and habitat features;
- Develop protocol for equipment to arrive to site clean and free of debris;
- Complete pre-construction surveys for vegetation management (pre-clearing plant surveys, delineation of invasive or noxious vegetation, and no-go zones for clearing);
- Consider routing that avoids or minimizes construction through wetlands/peatlands;
- Design/road construction techniques to prevent barrier effects from road construction through peatlands;
- Acquire permits as required from provincial and federal regulators; and
- Develop a Wetland Compensation Plan for unavoidable impacts to these environments.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for vegetation, weed and invasive species, soils, erosion and sediment control, spill prevention and response, and site restoration.

Operations

- Minimize vegetation/habitat clearing as much as practical;
- Establish setbacks around sensitive and/or protected species and habitat features;
- Develop protocol for equipment to arrive to site clean and free of debris; and
- Acquire permits as required from provincial and federal regulators.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for vegetation, weed and invasive species, soils, erosion and sediment control, spill prevention and response, and site restoration.

24.11 Species at Risk

24.11.1 Potential Effects

The following potential effects on SAR may be anticipated.

Construction

- Habitat loss directly through vegetation clearing required for road construction, laydown areas, stockpiles, and excavations;
- A loss or a reduction of available landscape features that contribute to Boreal Caribou winter habitat at a range scale as a direct result of vegetation clearing on the esker;
- Habitat degradation caused by alterations in hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), reductions in habitat connectivity, loss of travel corridors, loss of migration routes, disruption to breeding and calving grounds, and habitat fragmentation/habitat avoidance. This in turn may lead to changes in survival and reproductive success;
- Death of wildlife or reduction in habitat quality as a result of accidental releases of contaminants;
- Sensory disturbance related to proximity (noise and visual) impacts from maintenance equipment, traffic, and lighted areas, which can affect habitat suitability and use is especially possible in species that are light and/or noise sensitive;
- Loss of SAR as a result of construction or vehicle collision; and
- Attraction of wildlife to construction camps or the road corridor (e.g., food waste, ease-of-use) which can affect predator-prey relationships and thus wildlife survival and reproduction.

Operations

- Habitat degradation caused by alterations in hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), reductions in habitat connectivity, loss of travel corridors, loss of migration routes, disruption to breeding and calving grounds, and habitat fragmentation/habitat avoidance. This in turn may lead to changes in survival and reproductive success;
- Death of wildlife or reduction in habitat quality as a result of accidental releases of contaminants;
- Sensory disturbance related to proximity (noise and visual) impacts from maintenance equipment and roadway traffic, which can affect habitat suitability and use is especially possible in species that are noise sensitive;
- Loss of SAR as a result of construction or vehicle collision;
- Attraction of wildlife to the road corridor (e.g., food waste, ease-of-use) which can affect predator-prey relationships and thus wildlife survival and reproduction; and
- Increased harvest of wildlife, including SAR by humans for recreational or traditional use due to increased public access.

24.11.2 Preliminary Proposed Mitigation

The following preliminary mitigation measures are proposed to reduce the potential effects on SAR.

Construction

- Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to sensitive habitats, where feasible;
- Develop SAR monitoring plans, as needed;
- Develop offsetting or compensation plans to address residual effects to SAR and their habitat;
- Minimize vegetation/habitat clearing as much as practical;
- Limit temporary infrastructure, including vehicle and heavy equipment access routes;
- Regrade and revegetate temporarily cleared areas;
- Manage vegetation management plans along ditches to ensure good visibility for SAR;
- Avoid engaging in disruptive activities (clearing, construction) during key sensitive wildlife periods and locations where SAR mammals (such as Wolverines and Caribou) may be present;
- Avoid clearing of vegetation including bird nesting habitat during the migratory bird nesting season;
- Avoid clearing vegetation which may act as habitat for breeding and roosting bats;
- Reduce speed limits where wildlife interactions are expected;
- Prohibit the feeding of wildlife;
- Procedures to conduct reptile and amphibian rescues where needed;
- Install perimeter fencing to deter access by large wildlife where necessary;
- Instruct workers on wildlife awareness;
- Report wildlife observations and wildlife roadkills;
- Establish setbacks around sensitive and/or protected species and habitat features;
- Install signage in areas where frequent wildlife crossing of the roadway are expected;
- Consider the installation of wildlife crossing structures to facilitate movement of SAR over the roadway in areas of high wildlife concentrations; These would include different wildlife crossing structures for different wildlife taxa (e.g., mammals);
- Develop protocol to manage attractant waste;
- Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution;
- Manage noise using standard best management practices; and
- Acquire permits as required from provincial and federal regulators.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for wildlife, vegetation, noise, spill prevention and response, waste management, traffic, and site restoration.

Operations

- Develop SAR monitoring plans, as needed;
- Minimize vegetation / habitat clearing as much as practical;
- Manage vegetation management plans along ditches to ensure good visibility for SAR;
- Avoid engaging in disruptive maintenance activities during key sensitive wildlife periods and locations where SAR mammals (such as Wolverines and Caribou) may be present;
- Avoid clearing of vegetation including bird nesting habitat during the migratory bird nesting season;
- Avoid clearing vegetation which may act as habitat for breeding and roosting bats;
- Reduce speed limits where wildlife interactions are expected;
- Establish setbacks around sensitive and/or protected species and habitat features;

- Install signage in areas where frequent wildlife crossing of the roadway are expected;
- Consider the installation of wildlife crossing structures to facilitate movement of SAR over the roadway in areas of high wildlife concentrations; These would include different wildlife crossing structures for different wildlife taxa (e.g., mammals);
- Develop protocol to manage attractant waste;
- Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution;
- Manage noise using standard best management practices; and
- Acquire permits as required from provincial and federal regulators.

Additional mitigation measures will be included in Management Plans that will be developed for the Project (see **Table 25-1**). Management Plans will be developed based on standard best practices for wildlife, vegetation, noise, spill prevention and response, waste management, traffic, and site restoration.

25 Management Plans

The proponent will prepare management plans for the construction and operations phases of the Project. Although decommissioning is not anticipated, if decommissioning occurs the proponent will also develop a management plan for decommissioning. The applicable management plans will be prepared prior to the start of each Project phase and will incorporate feedback from consultation and engagement with federal and provincial government agencies, stakeholders, Indigenous communities and the public during the development of the EA/IA as appropriate and applicable.

The purpose of the management plans is to guide the proponent and its contractors in complying with applicable environmental legislation, best practice and industry standards, and commitments made in the EAR/IS by providing criteria, standard protocols, and mitigation measures to avoid, minimize, reduce, and/or offset potential environmental effects throughout all phases of the Project.

Both the construction and operation management plans will include numerous component management plans. The list of component management plans needed for construction will vary from those needed for operation, and component management plans that apply to both construction and operation will be tailored for the applicable phase. The management plans may require updates during each Project phase in the event of changes in legislation, best practice or industry standards. A preliminary list of component management plans is outlined below.

- Aboriginal Rights and Impact Interests Management;
- Air Quality and Dust Control Management;
- Blasting Management;
- Cultural Resources Management;
- Dewatering Management;
- Emergency Response Management;
- Environmental Awareness and Education;
- Erosion and Sediment Control;
- Fish and Fish Habitat Management;
- Health and Safety Management;
- Light Management;
- Noise Management;
- Petrochemical Storage and Handling;
- Preventative Maintenance;
- Site Restoration;
- Spill Prevention and Response Management;
- Soil Management;
- Surface Water and Storm Water Management;
- Traffic Management;
- Training Management;
- Vegetation Management (includes Sensitive Habitat, Noxious and Invasive Plants);
- Waste Management (including Hazardous, Contaminated and Controlled Materials); and
- Wildlife Management.

25.1 Applicable Legislation and Standards

The plans will incorporate applicable environmental legislation and best practice and industry standards. A preliminary list of legislation and standards is outlined below.

Communities/Municipalities

- Community-based Land Use Plans.

Provincial

- Ontario *Environmental Assessment Act, R.S.O. 1990, c. E.18;*
- Ontario *Environmental Protection Act, R.S.O. 1990, c. E.19;*
- Ontario *Water Resources Act, R.S.O. 1990, c. O.40;*
- Ontario *Safe Drinking Water Act, 2002, S.O. 2002, c. 32;*
- Ontario *Clean Water Act, 2006, S.O. 2006, c. 22;*
- Ontario *Heritage Act, R.S.O. 1990, c. O.18;*
- Ontario *Endangered Species Act, 2007, S.O. 2007, c.6;*
- Ontario *Fish and Wildlife Conservation Act*, 1997, S. O. 1997, c. 41;
- Ontario *Invasive Species Act, 2015, S.O. 2015, c. 22;*
- Ontario *Crown Forest Sustainability Act, 1994, S.O. 1994, c. 25;*
- Ontario *Forest Fires Prevention Act, R.S.O. 1990, c. F.24;*
- Ontario Regulation 207/96: Outdoor Fires *(under* Ontario *Forest Fires Prevention Act*);
- Ontario *Public Lands Act, R.S.O. 1990, c. P.43;*
- Ontario *Far North Act, 2010, S.O. 2010, c. 18;*
- Ontario *Aggregate Resources Act, R.S.O. 1990, c. A.8;*
- Ontario *Lakes and Rivers Improvement Act, R.S.O. 1990, c. L.3;*
- Ontario *Provincial Parks and Conservation Reserves Act, 2006, S.O. 2006, c. 12;*
- Ontario *Health Protection and Promotion Act, R.S.O. 1990, c. H.7;*
- Ontario *Occupational Health and Safety Act, R.S.O. 1990, c. O.1;*
- Ontario *Building Code Act, 1992, S.O. 1992, c. 23;*
- Ontario Regulation 903, Wells R.R.O. 1990, Wells (under Ontario *Water Resources Act*);
- Ontario Regulation 169/03, Ontario Drinking Water Quality Standards (under *Safe Drinking Water Act, 2002*);
- Ambient Air Quality Criteria (AAQC) (MECP, 2020b);
- Ontario Ministry of Transportation, 2020: Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects (MTO, 2020a);
- Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning – NPC 300 (MOECC, 2013);
- Ministry of Transportation of Ontario Environmental Guide for Noise (MTO, 2022);
- MTO Provincial Standard OPPS.MUNI 120, General Specification of the Use of Explosives;
- A Protocol for Dealing with Noise Concerns During the Preparation, Review and Evaluation of Provincial Highways and Environmental Assessments (MTO, 1996);
- Water management: policies, guidelines, provincial water quality objectives (Ministry of the Environment and Energy, 1994, as amended);
- Ontario Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat (as appropriate depending on the species present, [DFO, 2013]);
- Ontario Provincial Standard Specification (OPSS) 517 – Dewatering of Pipeline, Utility, and Associated Structure Excavation and OPSS 518 – Construction Specification for Control of Water from Dewatering Operations;

- Ontario Provincial Standard Specification (OPSS) 805 – Construction Specification for Temporary Erosion and Sediment Control Measures;
- Draft Guidelines for Ministries on Consultation with Aboriginal Peoples related to Aboriginal Rights and Treaty Rights and the documentation on the Duty to Consult with Aboriginal Peoples in Ontario (Ministry of Indigenous Affairs, 2021);
- MTO/DFO/MNRF Protocol for Protecting Fish and Fish Habitat on Provincial Transportation Undertakings (MTO, 2006);
- MNRF/DFO Protocol for Review and Approval of Forestry Water Crossings (MNRF and DFO, 2020);
- Woodland Caribou Recovery Strategy (MECP, 2021b);
- Wolverine Recovery Strategy (MECP, 2021c);
- Moose Management Policy (MECP, 2021d);
- Significant Wildlife Habitat Technical Guide (MNR, 2000);
- Significant Wildlife Habitat Criteria Schedules – 3E (MNRF, 2015) and 3W (draft – MNRF, 2017a);
- Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales (MNR, 2010);
- Bats and bat habitats: Guidelines for wind power projects (MNR, 2011);
- Guide for the Avoidance Alternatives Form for activities that may require an overall benefit permit under clause 17(2)(c) of the Endangered Species Act (MNR, 2012);
- Best Management Practices for Aggregate Activities and Woodland Caribou in Ontario (MNRF, 2016);
- Survey Protocol for Species at Risk Bats within Treed Habitats: Little Brown Myotis, Northern Myotis & Tri-Coloured Bat (MNRF, 2017b);
- Model Municipal Noise Pollution Control By-Law – Publication NPC 119 – Blasting (MOE, 1978a);
- Model Municipal Noise Control By-Law – Publication NPC 115) – Construction Equipment (MOE, 1978b);
- Code of Practice: Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario (MOE, 2014a);
- Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario (MOE, 2014b);
- Code of Practice for Consultation in Ontario's Environmental Assessment Process (MOE, 2014c);
- Best Management Practices for Mineral Exploration and Development Activities and Woodland Caribou in Ontario (MECP, 2020c);
- Best Management Practices for renewable energy, energy infrastructure, and energy transmission activities and Woodland Caribou in Ontario (MECP, 2020d);
- Recovery Strategy for the Eastern Whip-poor-will (*Antrostomus vociferus*) in Ontario. Ontario Recovery Strategy Series (MECP, 2020e);
- Standards and Guidelines for Consultant Archaeologists (MTCS, 2011); and
- Standard Practice for Aggregate Resource Evaluation (MTO, 2002).

Federal

- *Impact Assessment Act* [S.C. 2019, c. 28, s. 1];
- *Canadian Environmental Protection Act* [S.C. 1999, c. 33];
- *Fisheries Act* [R.S.C., 1985, c. F-14 (last amended on 2019-08-28)];
- *Migratory Birds Convention Act* and regulations [S.C. 1994, c. 22];
- *Canadian Navigable Waters Act* [R.S.C., 1985, c. N-22];
- *Species at Risk Act* [S.C. 2002, c. 29];
- *Transportation of Dangerous Goods Act* and regulations [S.C. 1992, c. 34];
- *Explosives Act* [R.S.C., 1985, c. E-17];
- Canadian Environmental Quality Guidelines (CCME, 2022);
- CCME Canadian Sediment Quality Guidelines for the Protection of Aquatic Life;

- CCME Canadian Water Quality Guidelines for the Protection of Aquatic Life;
- CCME Canada-wide Standards for Particulate Matter and Ozone;
- ECCC General Nesting Periods for Migratory Birds (ECCC, 2018);
- Guidelines to Avoid Harm to Migratory Birds (GoC, 2022);
- DFO Fish and Fish Habitat Protection Policy Statement (DFO, 2019);
- DFO Measures to Protect Fish and Fish Habitat (DFO, 2022);
- DFO Best Management Practices for Pile Driving and Related Operations (DFO, no date);
- DFO Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters (Wright and Hopky, 1998);
- Environmental Assessment Best Practice Guide for Wildlife at Risk in Canada (Lynch-Stewart, 2004);
- National Fire Code (National Research Council Canada, 2015);
- Workplace Hazardous Materials Information System (WHMIS, 2022);
- Canadian Handbook on Health Impact Assessment (Health Canada, 2004); and
- Aerial waterbird survey protocols (Ducks Unlimited Canada, 2003).

25.2 Summary of Preliminary Component Management Plans

Table 25-1 provides a preliminary summary of the anticipated management plans and mitigation measures associated with them. The full list of management plans and mitigation measures will be developed during the EA/IA and presented in the EAR/IS.

Table 25-1: Summary of Preliminary Component Management Plans

Management Plan	Project Phase	Mitigation Measures
Aboriginal Rights and Impact Interests	C / O&M	The proponent will engage with participating Indigenous communities and organizations to develop an Aboriginal Rights and Interests Impact Management Plan specific to the rights and interests-based activities of participating Indigenous communities pertaining to: › Traditions, customs, protocols, and values; › Spirituality, rituals, and ceremonies; › Connections to the land, culturally important sites, areas, and resources including any structure, site, or thing that is of historical, archaeological, paleontological, or architectural significance; › Cultural landscapes and access to travel routes; › Environmental stewardship and Indigenous management of culturally important areas; › The experience of being on the land including the perception of availability and fragmentation of land for rights-based activities; › Cultural traditions and ways of life, being, and knowing tied to health, resilience, and well-being and the outlook of Indigenous communities; › Community cohesion; › Diet and food security; and › Cultural knowledge transfer and protection of language. The plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects listed above. The plan will further describe cross-cultural awareness training, which will be developed in collaboration with engaged Indigenous communities and groups where applicable. This training is expected to build awareness and reduce potential adverse interactions with Indigenous communities and will include cultural awareness education and training for staff and on-the-ground personnel during construction.

Management Plan	Project Phase	Mitigation Measures
Air Quality and GHG	C / O&M	› Use of efficient, lower emission vehicles and equipment where practical; › Require appropriate catalytic converters, mufflers and exhaust systems are in place on equipment and functioning as designed; › Minimize idling where practical; › Spray overburden and soils with water prior as needed; and › Use of water sprays to control dust on roads.
Blasting	C / O&M	› Protective measures (e.g., use of blasting mats) to mitigate adverse noise and vibration effects, impacts to air quality or geotechnical stability, and impacts of blasting activities to the receiving environment; › Blast management: charge quantity and charge delay to be designed for site specific conditions to minimize impact; › Sensitive time periods to be considered during scheduling blasting; › Procedure to visually check that no wildlife is visible on the site before commencing blasting; and › Delineation of a blast zone and safe zone.
Cultural Resources	C	› General procedures to identify, report, and manage archaeological and heritage resources during construction; › Procedure for chance finds to give on-site personnel information to identify archaeological materials if encountered in the construction area, resources to report the find, and actions to follow to protect the site from impacts; and › Monitor areas of archaeological potential during construction to identify archaeological deposits, if present.
Dewatering	C	› Dewatering activities should, at a minimum, follow the Ontario Provincial Standard Specification (OPSS) 517 – Dewatering of Pipeline, Utility, and Associated Structure Excavation and OPSS 518 Construction Specification for Control of Water from Dewatering Operations; › Dewatering of groundwater (e.g., from excavations) should be carried out in a manner that will preserve the strength of the foundation soils and prevent the loss of fine materials. A combination of typical geotextiles, clear stones, and perforated or slotted pipes (filters) should be placed/installed in the sumps to prevent migration and loss of fine-grained materials during dewatering; › Pumping of surface water will be conducted using a pump equipped with a fish screen and in accordance with the DFO (2000) guideline; › Wherever possible, avoid any in-water or near-water work including pumping and dewatering during the Ontario Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat (as appropriate depending on the species present, [DFO, 2013]). If in-water work is required during this period, DFO and MNRF will be consulted well in advance to request an extension to the fisheries timing window; › Complete fish rescues in isolations prior to pumping/dewatering activities taking place. The fish rescue will consist of capturing fish trapped within the isolated area and relocating them downstream of the work site; › Downstream flows will be maintained during the pumping/dewatering work by either in-stream diversion or active by-pass pumping; › Water will be filtered prior to being pumped downstream of the isolation, likely by pumping it through rip rap which will also prevent scour/erosion. The water will also be drawn from the near surface to minimize turbidity; › All in-stream works will be carried out to ensure that turbidity/total suspended solids (TSS) levels do not exceed the applicable water quality standards; › Refuelling of the pumps will take place at least 30 m away from the water bodies; and

Management Plan	Project Phase	Mitigation Measures
		› Avoid leaking of oil and hydraulic fluids from dewatering related equipment and machines by performing daily inspections. Contingency measures should be developed to control and contain the spills.
Emergency Response	C / O&M	› To be developed in accordance with applicable best practices.
Environmental Awareness and Education	C / O&M	› Procedures for orientation, meetings and training to provides information for all personnel and contractors regarding environmental sensitivities and appropriate mitigation measures.
Erosion and Sediment Control	C / O&M	› Erosion and Sediment Control (ESC) measures (e.g., OPSS 805, Construction Specification for Temporary Erosion and Sediment Control Measures) should be incorporated into the design and implemented during the construction, at a minimum, to prevent erosion and migration of soils from the site; › Procedures to be used during clearing and other construction or maintenance activities with the potential to result in erosion or sedimentation due to rainfall, flowing water, wind, and steep slopes; › Specifications for protection for steep slopes, stockpiles, and disturbed areas during storm events; › Provisions for re-contouring the site to manage drainage and minimize potential for erosion; › Employ erosion controls (e.g., silt fences, berms, ditches) and erosion protection (e.g., mats, staking, re-sloping) to reduce the potential for transport of sediments to water bodies; › Use of ditches and storm water lagoons, as available, to manage storm water during decommissioning; › Restore surface drainage conditions to a state congruent with the surrounding environment; and › Procedures for removal and disposal of construction ESC measures.
Fish and Fish Habitat	C / O&M	› Include maps to show relevant attributes, such as fish habitat, no-go zones, limits of construction, etc.; › Wherever possible, avoid any in-water or near-water work during the Ontario Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat (as appropriate depending on the species present, [DFO, 2013]). If in-water work is required during this period, DFO and MNRF will be consulted well in advance to request an extension to the fisheries timing window; › Construction activity specific Stop Work Protocols that allow for the temporary cessation of Project-related activities and account for site-specific species and observation conditions; › Specification of construction activities for which fish monitoring would be necessary and procedures for monitoring construction activities by a qualified person; › Minimize the duration of in-water work as much as possible and avoid the high spring flows to further reduce risk to fish and fish habitat; › Restrict or limit access to watercourses to reduce recreational fishing pressure; and › Provide information on fish species that are, or may be present in the aquatic environment.

Management Plan	Project Phase	Mitigation Measures
Health and Safety	C / O&M	› Personal protective equipment, proper protocols for working in and around machinery, and location of existing structures, utilities, and potential hazards within the work site; › Plan to reduce communicable disease outbreaks; › Safety orientation, incident reporting, drugs and alcohol, security; › Safety requirements (e.g., housekeeping, personal protective equipment) and Job requirements (safety audits, toolbox/safety meetings); › Protocols for: – Permit to Work; – Lockout and Tagout; – Confined Space Entry; – Excavation; and – Working at Heights.
Light	C / O&M	› Use an industrial low-profile light fixture that side casts light; › Use smart, low consumption light-emitting diode (LED) lighting; › Illuminate those parts of the Project that need lighting; › Schedule illumination through motion and occupancy sensors for both indoor and outdoor applications, thereby reducing the amount of light trespass; › Procedure for community notification of any unusual nighttime activities (e.g., if needed for maintenance); and › Communication procedures for public inquiry or complaint.
Noise	C / O&M	› Procedure for community notification of noisy activities; › Procedure for scheduling noisy activities (e.g., avoid co-occurrence of activities with significant noise impact, avoid activities with significant noise impact during nighttime hours); › Communication procedures for public inquiry or complaint; › Implement permanent noise mitigation features such as earth berms to eliminate the direct line of sight between the source (road) and receptor areas for locations where noise impact is determined to be significant, if applicable; and › Implement permanent operational mitigation measures such as reduced speed limit along the segments of the road where noise impact is determined to be significant.
Petrochemical Storage and Handling	C / O&M	› Designated areas for storage of petrochemicals, refuelling and maintenance of vehicles, equipment, and machinery; › Specifications for the proper storage of petrochemical products, e.g., minimum distances from sensitive locations or work sites, containment, and safety requirements; › Specifications for the handling of petrochemical products and refuelling of vehicles, equipment, and machinery; › Specifications for the proper disposal of petrochemical products; › Specifications for training of workers that handle petrochemicals; and › Environmental monitoring and reporting requirements.
Preventative Maintenance	O&M	› Schedule of planned maintenance and periodic inspections for the roadway and structures.
Site Restoration	C	› Identification of location(s) of site-specific restoration; › Outline timing requirements and environmental monitoring requirements; › Description of procedures for soil salvage and management; › Details of planting requirements, e.g., plant species list, number, size, and plant spacing, specifications for hydroseeding; and › Outline post-construction maintenance and care.

Management Plan	Project Phase	Mitigation Measures
Spill Prevention and Response	C / O&M	› Identification of responsible Project personnel and external contacts; › A description of the communication procedure and notification requirements in the event of a spill or emergency; › Specification of the containment, recovery, and clean-up procedures (including those applicable to equipment refuelling and servicing, and spill preparedness, such as spill kits and booms); › A list and a description or purpose of spill abatement materials and equipment to be stored and available on-site; › Specification of the location of spill clean-up materials and equipment; › A description of equipment refuelling and servicing procedures and limitations; › A description of follow-up and reporting requirements; › A list of training requirements for personnel; › Communication procedure and notification requirements in the event of a spill and/or emergency; and › Containment, recovery, and clean-up procedures (including those applicable to equipment refuelling and servicing, and spill preparedness, such as spill kits and booms).
Soil	C	› Specifications for stripping/removal of soils and organics; › Designation of areas for temporary stockpiling and measures to prevent soil loss; › Specifications for transportation of soil, including covering loads and/or spraying overburden and soil with water if needed; › Specifications for establishing ground cover on soil stockpiles to prevent or minimize erosion and sediment transport; and › Specifications for establishing ground cover on exposed soil surfaces to prevent or minimize erosion and sediment transport.
Surface Water and Storm Water	C	› Protective measures for maintaining current surface water quality and avoiding exceedances of water quality standards or criteria; › Outline surface water quality criteria (federal and provincial); › Methods for surface water diversion or dewatering if it is necessary for site preparation, including ponds, drainage ditches, and culverts as necessary; › Environmental monitoring and reporting requirements; and › Establish setbacks around water bodies; limit the extent of temporary disturbance.
Traffic	C / O&M	› Worker safety training to ensure that all vehicles and equipment are operated in a safe manner; › Worker education on how to respect and work with wildlife; › Require construction and maintenance related equipment to be operated in a safe and appropriate manner; and › Implement speed limits.
Training	C / O&M	› Measures to train local, including Indigenous, people for construction and operation jobs; and › Cultural awareness education and training for staff and on-the-ground personnel during construction.

Management Plan	Project Phase	Mitigation Measures
Vegetation	C / O&M	› Minimize disturbance to the existing vegetation, including sensitive habitat such as riparian zones and wetlands; › Reduce and avoid impacts outside of the project footprint; › Require vehicles to arrive on-site clean and free of soil and debris which might contain invasive plant species; › Procedures to identify and control the spread or introduction of invasive or noxious plants; › Designate areas for temporary stockpiling of vegetation; › Specifications for the handling, storage, and disposal of vegetation, including noxious and invasive plants; › Pre-construction survey protocol for vegetation management, as appropriate (e.g., pre-clearing plant survey, delineating areas of invasive or noxious vegetation, and no-go zones for clearing); and › Provide information on rare and sensitive habitat to be protected from disturbance located within and surrounding the site.
Waste	C / O&M	› All waste management procedures will be conducted in compliance with provincial and federal statute and regulations including but not limited to the collection, storage and disposal of food waste, hazardous waste (including contaminated soil and used spill kit materials), sewage, waste construction materials, and recyclables in a manner consistent with regulation and inaccessible to wildlife; and › Describe procedures and Best Management Practices for general housekeeping.
Wildlife	C / O&M	› Describe and identify sensitive wildlife habitat, including drawings to show them relative to the Project footprint and make them available to construction personnel; › Establish setbacks around sensitive species and/or habitat features during construction; › Avoid any vegetation clearing between April 21 and August 14, within the nesting period for nesting zone C6; › Avoid clearing vegetation during the roosting season to reduce impacts to bats; › If vegetation clearing is proposed during the sensitive timing windows, then pre-clearance nest and roost surveys will be done to identify active bird nests and establish buffers; › Pre-construction survey protocols for practical wildlife management (e.g., bird/nesting surveys, wildlife surveys, small wildlife salvage and relocation, as required); › Establish reduced speed limits and signage in areas where wildlife interactions are expected; › Develop a protocol to manage attractant waste; › Manage vegetation along ditches to ensure good visibility for wildlife; › Implement provisions to avoid disturbing or removing active bird nests within the facility other than those not protected by-law; › Specifications for wildlife (including birds) monitoring requirements; › Prohibit the feeding of wildlife; › Procedures to conduct reptile and amphibian rescues where needed; › Install perimeter fencing to deter access by large wildlife where necessary; › Instruct drivers on wildlife awareness; and › Report wildlife observations and wildlife roadkills.

Notes: C = construction; O&M = operations and maintenance.

26 Greenhouse Gas Emissions Estimate

Construction and continued operation of the Project will result in the generation of GHGs. GHGs contribute to climate change and are a concern to provincial agencies and federal authorities, as well as the public. Emissions of GHGs are expressed as carbon dioxide equivalent (CO_2e) units ($ktCO_2eq$).

The primary sources of GHG emissions during the construction stage of the Project include emissions from construction vehicles and equipment and emissions from construction camps. During the operations phase, emissions of GHGs will result from vehicle transportation on the road, as well as emissions from equipment used for maintenance operations.

Preliminary conservative estimates of GHG emissions are not available for the construction phase. Preliminary conservative estimates of GHG emissions from the Project for the operations phase are 80 kilotonnes of CO_2eq/year. Project emission estimates for the operations phase are based on an assumed traffic loading of 1,000 AADT travelling the full length of the roadway, and an average fleet fuel usage (assuming heavy vehicles) specified by Natural Resources Canada (NRCAN, 2019). An additional 25% safety factor is incorporated in this estimate to allow for conservatism in the estimates.

Detailed estimates of GHG emissions from construction and operation of the Project are not available, but will be provided in the EAR/IS, along with an assessment of changes in sources and sinks of carbon from the clearing of vegetation and disturbance of peatlands/wetland. Emissions rates specific to construction related activities will be quantified during the air quality and GHG assessments. These assessments will utilize the following guidance:

- Strategic Assessment of Climate Change (ECCC, 2020a); and
- Draft Technical Guide related to the Strategic Assessment of Climate Change: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment (ECCC, 2021).

In addition to GHG emissions estimates, a climate adaptation and resiliency assessment will be conducted in accordance with the following guidance:

- Strategic Assessment of Climate Change (ECCC, 2020a); and
- Draft Technical Guide related to the Strategic Assessment of Climate Change: Assessing Climate Change Resilience (ECCC, 2022).

27 Waste, Discharges and Emissions

Table 27-1 summarizes the waste, discharges and emissions that are likely to be generated during the Project.

Table 27-1: Project Waste, Discharges and Emissions

Waste, Discharge, or Emission	Project Activity and Potential Mitigation	Phase
Air		
Noise Emissions	Generated from equipment and vehicles during site preparation, hauling, blasting, pile driving, road maintenance, and road use. These will be managed using Best Management Practices, such as use of proper equipment and adherence to manufacturer's specified maintenance frequencies. Noise control using current Best Management Practices for construction and maintenance equipment, including but not limited to using newer, well-maintained equipment, using boring/augering equipment instead of pile drivers, and quieter diesel generators, as well as specified/original exhaust and intake muffling.	Site Preparation, Construction and Operations
Air and Greenhouse Gas Emissions	Generated from exhaust of vehicles and equipment during site preparation, hauling, blasting, road maintenance, and road use. These will be managed by applying Best Management Practices for construction and maintenance equipment, including but not limited to minimization of idling time by shutting equipment off when not in use, or reducing idling times, maintaining equipment in proper working condition according to manufacturer's specifications, and use of speed limits.	Site Preparation, Construction and Operations
Fugitive Dust Emissions	Dust generated from cleared areas, equipment/vehicle activities, and road traffic during site preparation, earthworks, blasting, soil stockpiling, maintenance, and road use. These will be managed by applying Best Management Practices, which may include barriers/enclosures around storage piles, wetting storage piles, covers and limiting the number and height of storage piles. Other control measures could include wetting road surfaces during dry periods, cleaning of construction and maintenance equipment and use of speed limits.	Site Preparation, Construction and Operations
Land		
Waste Oil	Maintenance of heavy equipment would occur at specific temporary construction camps/work sites and ancillary facilities. Any waste oil will be contained and disposed of at a licensed facility.	Site Preparation, Construction and Operations
Hazardous and Non-Hazardous Solid Waste	Generated at temporary construction camps/work sites and ancillary facilities during operations and maintenance activities (e.g., construction waste, domestic waste, wood, cardboard, plastics, foods, metals). Reduce, re-use and recycle materials and recover resources in all aspects of the Project, prior to disposal into the solid waste stream (i.e., at existing landfill sites or licensed facility), including appropriate separation, storage, transport and disposal in accordance with applicable provincial and federal laws and regulations, and with respect for Indigenous communities' traditional use of lands and surrounding environment. It is also expected that litter may be generated during construction and operations and will be managed via a litter management program.	Site Preparation, Construction and Operations

Waste, Discharge, or Emission	Project Activity and Potential Mitigation	Phase
Slash and Root Waste	Generated from clearing and grubbing operations including but not limited to chipping, leaving in place and scattering.	Site Preparation
Excavated Spoils	Unsuitable construction materials generated during roadbed excavation and construction (soils and organics) will be generated. These materials are expected to be used in road construction if possible (e.g., roadbeds/berms).	Site Preparation and Construction
Water		
Domestic Wastewater and Sewage	Both hazardous and non-hazardous, in the form of liquid effluent generated by the temporary workforce/construction camps and ancillary facilities. Depending on available facilities, these may be treated on-site using portable facilities and/or transported off-site by tanker truck for treatment at approved disposal facilities.	Site Preparation, Construction, and Operations
Dewatering Discharge	Groundwater and surface water will be dewatered to facilitate construction of roads and watercourse crossings. Water generated from dewatering activities will be treated if necessary and returned to the natural environment.	Site Preparation and Construction
Stormwater	Site runoff is expected to be managed through stormwater ditches and ponds.	Operations
Erosion and Sedimentation	These processes and discharges will be managed through best ESC management practices, including but not limited to sediment fences, sediment ponds, check dams and erosion control fabric.	Site Preparation, Construction and Operations
Metal Leaching and Acid Rock Drainage	Metal leaching and acid rock drainage may result from aggregate source locations and quarried materials. Materials will be tested for acid rock drainage/metal leaching potential prior to use in construction. Runoff from the aggregate sources will be tested and treated (if required) prior to discharging to the natural environment.	Site Preparation and Construction

28 References

Abbott, C., Coulson, M., Gagné, N., Lacoursière-Roussel, A., Parent, G.J., Bajno, R., Dietrich, C., May McNally, S. 2021. Guidance on the Use of Targeted Environmental DNA (eDNA) Analysis for the Management of Aquatic Invasive Species and Species at Risk. DFO Can. Sci. Advis. Sec. Res. Doc. 2021/019. iv + 42 p. Available: https://waves-vagues.dfo-mpo.gc.ca/Library/40960791.pdf

AECOM Canada Ltd. (AECOM). 2020a. Proposed Terms of Reference – Marten Falls Community Access Road – Environmental Assessment. Prepared for Marten Falls First Nation. September 2020.

AECOM Canada Ltd. (AECOM). 2020b. Northern Link Road Terrestrial Existing Conditions Report. Draft. Prepared for Marten Falls First Nation. April 2020.

AECOM Canada Ltd. (AECOM). 2021. Northern Road Link (Phase 2) – Analysis of Route Alternatives. Draft. May 2021.

Animbiigoo Zaagi'igan Anishinaabek (AZA). 2021. Animbiigoo Zaagi'igan Anishinaabek. Welcome to Animbiigoo Zaagi'igan Anishinaabek. Website: Available: http://www.aza.ca

Anonymous. 2009. Accommodating Western Science and Indigenous Knowledge: Summary for Wunnumin, Webequie and Nibinamik First Nations Capacity Building and Critical Habitat Program. Case Study: Woodland Caribou and Wolverine.

Aroland First Nation. 2021. Aroland First Nation. Website. Available: https://www.arolandfirstnation.ca

Banton, E., Johnson, J., Lee, H., Racey, G., Uhlig, P., Wester, M. 2009. Ecosites of Ontario: Boreal. Operational Draft. Available: https://ecoman.ca/custom/uploads/2020/02/10-copies_41-Ecosites-of-Ontario_BW_DOUBLE-SIDED.pdf

Barnett, P.J., Yeung, K.H. and McCallum, J.D. 2013a. Surficial geology of the Lansdowne House area northeast, northern Ontario; Ontario Geological Survey, Preliminary Map P.3697, scale 1:100 000. Available: http://www.geologyontario.mndm.gov.on.ca/mndmfiles/pub/data/imaging/P3697//P3697.pdf

Barnett, P.J., Yeung, K.H. and McCallum, J.D. 2013b. Surficial geology of the Lansdowne House area northwest, northern Ontario; Ontario Geological Survey, Preliminary Map P.3696, scale 1:100 000. Available: http://www.geologyontario.mndm.gov.on.ca/mndmfiles/pub/data/imaging/P3696//P3696.pdf

Bond, A. and Quinlan, L., 2018. Indigenous gender-based analysis for informing the Canadian minerals and metals plan. Policy Paper. Akwesasne, ON: Native Women's Association of Canada/L'Association des femmes autochtones du Canada. Available: https://www.minescanada.ca/sites/default/files/indigenous-gender-based-analysis-cmmp_.pdf

Brennan, S. 2011. Violent victimization of Aboriginal women in the Canadian provinces, 2009. Released on May 17, 2011. Available: https://www150.statcan.gc.ca/n1/en/pub/85-002-x/2011001/article/11439-eng.pdf?st=8TlH3MNm

British Columbia Ministry of Environment, Lands, and Parks. 1999. Inventory Methods for Waterfowl and Allied Species: Loons, Grebes, Swans, Geese, Ducks, American Coot, and Sandhill Crane. Standards for Components of British Columb'a's Biodiversity No 18. Resources Inventory Branch for the Terrestrial Ecosystem Task Force Resources Inventory Committee. Available: https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/risc/waterfowl.pdf

Canadian Council of Ministers of the Environment (CCME). 2021. Canadian Ambient Air Quality Standards. Accessed July 2022. Available: https://www.ccme.ca/en/air-quality-report

Canadian Council of Ministers of the Environment (CCME). 2022. Canadian Environmental Quality Guidelines. Accessed December 21, 2022. Available: Canadian Council of Ministers of the Environment | Le Conseil canadien des ministres de l'environment (ccme.ca)

Canadian Environmental Assessment Agency. 2018. Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012. Version 2, March 2018. Available: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/assessing-cumulative-environmental-effects-ceaa2012.html

Canadian Standards Association (CSA). 2019. Canadian Highway Bridge Design Code CSAS6.

Chan, L., Receveur, O., Batal, M., David, W., Schwartz, H., Ing, A., Fediuk, K., Black, A., and Tikhonov, C. 2014. First Nations Food, Nutrition and Environment Study (FNFNES): Results from Ontario (2011/2012). Ottawa: University of Ottawa. Available: https://www.fnfnes.ca/docs/FNFNES_Ontario_Regional_Report_ENGLISH_2019-10-16.pdf

Chesnaux, R. 2013. Regional recharge assessment in the crystalline bedrock aquifer of the Kenogami Uplands, Canada. Hydrological Sciences Journal, Vol. 58(2), pages 421-436.

Cision. 2017. Northern First Nations Leadership clarify involvement in Infrastructure Development following Province's Ring of Fire Announcement. Available: https://www.newswire.ca/news-releases/northern-first-nations-leadership-clarify-involvement-in-infrastructure-development-following-provinces-ring-of-fire-announcement-641523693.html

Cloutier, V., Veillette, J., Roy, M., Gagnon, F., and Bois, D. 2007. Regional hydrogeochemistry of groundwater in fractured Canadian Shield rock and glaciofluvial formations in Abitibi, Quebec. Ottawa-Geo 2007 Conference, Ottawa, ON Oct 21-24, 2007. Pages: 355-362.

Crins, W.J., Gray, P.A., Uhlig, P.W.C, Wester, M.C. 2009. The Ecosystems of Ontario, Part I: Ecozones and Ecoregions. Ontario Ministry of Natural Resources, Peterborough Ontario, Inventory, Monitoring and Assessment, SIB TER IMA TR- 01, 71pp. Available: https://files.ontario.ca/mnrf-ecosystemspart1-accessible-july2018-en-2020-01-16.pdf

Dalseg, S., Kuokkanen, R., Mills, S., Simmons, D. 2018. Gendered Environmental Assessments in the Canadian North: Marginalization of Indigenous Women and Traditional Economies. The Northern Review. 47. 135-166. 10.22584/nr47.2018.007.

Daoud, N., Urquia, M.L., O'Campo, P., Heaman, M., Janssen, P.A., Smylie, J. and Thiessen, K., 2012. Prevalence of abuse and violence before, during, and after pregnancy in a national sample of Canadian women. American journal of public health, Volume 102 Issue 10, pp.1893-1901.

Dobbyn, J.S. 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists, Toronto, Ontario.

Ducks Unlimited Canada. 2003. Aerial waterbird survey protocols. Ducks Unlimited Canada, Western Boreal Office, Edmonton, Alberta, Canada. Unpublished Report.

Environment and Climate Change Canada (ECCC). 2018. General Nesting Periods for Migratory Birds. Accessed May 2022. Available: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html

Environment and Climate Change Canada (ECCC). 2020a. Strategic Assessment of Climate Change. Revised October 2020. Available: https://www.strategicassessmentclimatechange.ca/

Environment and Climate Change Canada (ECCC). 2020b. National Inventory Report 1990-2018: Greenhouses Gas Sources and Sinks in Canada. Available: http://www.publications.gc.ca/site/eng/9.506002/publication.html

Environment and Climate Change Canada (ECCC). 2021. Technical Guide Related to the Strategic Assessment of Climate Change: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment. DRAFT. August 2021. Available: https://www.strategicassessmentclimatechange.ca/

Environment and Climate Change Canada (ECCC). 2022. Technical Guide Related to the Strategic Assessment of Climate Change: Assessing Climate Change Resilience. DRAFT. March 2022. Available: https://www.strategicassessmentclimatechange.ca/

Fisheries and Oceans Canada (DFO). No date. Best Management Practices for Pile Driving and Related Operations.

Fisheries and Oceans Canada (DFO). 2000. Interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater. Available: https://www.dfo-mpo.gc.ca/pnw-ppe/codes/screen-ecran-eng.html

Fisheries and Oceans Canada (DFO). 2013. Ontario Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat. Available: https://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/on-eng.html.

Fisheries and Oceans Canada (DFO). 2019. Fish and Fish Habitat Protection Policy Statement, August 2019. Available: https://www.dfo-mpo.gc.ca/pnw-ppe/policy-politique-eng.html

Fisheries and Oceans Canada (DFO). 2022. Measures to Protect Fish and Fish Habitat. Available: https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html

Five Nations Energy Inc. (Five Nations). 2012. Fort Albany and Kashechewan. Available: https://www.fivenations.ca/index.php/community/fort-albany-and-kashechewan

Golder Associates Ltd. (Golder). 2013a. Cliffs Chromite Project Environmental Assessment: Chromite Project Environmental Assessment Water and Sediment Quality Technical Supporting Document Part 2: Integrated Transportation System. Draft Report. No. GAL-009-TSD-V3.1. GOL10CLF-0826-07-124-0009-002_B. September 2013.

Golder Associates Ltd. (Golder). 2013b. Cliffs Chromite Project Environmental Assessment: Terrestrial Technical Supporting Document. Part 1: Mine Site and Integrated Transportation System. Draft Report. No. GAL-010-TSD-V3.1. GOL10CLF-0826-07-124-0011-001_B. September 2013.

Government of Canada (GoC). 2015. Comprehensive Claims. Available: https://rcaanc-cirnac.gc.ca/eng/1100100030577/1551196153650

Government of Canada (GoC). 2019a. Ontario – Agreements under negotiation. Available: https://rcaanc-cirnac.gc.ca/eng/1100100031867/1529421780818

Government of Canada (GoC). 2019b. Measures to protect fish and fish habitat. Available: https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html

Government of Canada (GoC). 2020. Self-government. Available: https://www.rcaanc-cirnac.gc.ca/eng/1100100032275/1529354547314#chp4

Government of Canada (GoC). 2021. First Nation Profiles. Available: https://fnp-ppn.aadnc-aandc.gc.ca/fnp/Main/index.aspx?lang=eng

Government of Canada (GoC). 2022. Guidelines to avoid harm to migratory birds. Available: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html

Government of Ontario. 2014. The Provincial Policy Statement. Available: https://www.ontario.ca/document/provincial-policy-statement-2014

Government of Ontario. 2019. Far North Land Use Strategy: Discussion paper Available: https://www.ontario.ca/page/far-north-land-use-strategy-discussion-paper#:~:text=The%20Far%20North%20Act%2C%202010%20%28the%20Act%29%20is,in%20the%20area%20shown%20in%20the%20map%20below

Government of Ontario. 2021. Draft Guidelines for Consultation with Indigenous Peoples Related to Aboriginal Rights and Treaty Rights. Available: https://www.ontario.ca/page/draft-guidelines-ministries-consultation-aboriginal-peoples-related-aboriginal-rights-and-treaty

GreenForest Management Inc. 2013. Ring of Fire & Northern Ontario Community All-Weather Road Access Preliminary Location & Cost Projection. Report to KWG Resources Inc. Available: http://kwgresources.com/wp-content/uploads/2016/08/GFMI_KWG-Road-Location-Cost-Projection-Dec-2013.pdf

Harris, A., 1996. Field Guide to the Wetland Ecosystem Classification for Northwestern Ontario. Ontario Ministry of Natural Resources, Northwest Sci. Technol. Field Guide. Thunder Bay, Ontario. 31 August 1996.

Health Canada. 2004. Canadian Handbook on Health Impact Assessment. Available: https://publications.gc.ca/site/eng/9.647420/publication.html?wbdisable=true#:~:text=Publication%20information%20%20%20Department%2FAgency%20%20%20Canada.,%20%20%5BFrench%5D%20%2010%20more%20rows%20

Health Canada. 2017. Guidance for Evaluating Health Impacts in Environmental Assessment: Noise. Available: https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidance-evaluating-human-health-impacts-noise.html

Heginbottom, J.A., Dubreuil, M.A., and Harker, P. 1995. Permafrost – Canada, National Atlas of Canada MCR 4177. Scale 1:7,500,000, Department of Energy, Mines and Resources Canada. Available: https://doi.org/10.4095/294672

Hegmann, G., C. Cocklin, R. Creasey, S. Dupuis, A. Kennedy, L. Kingsley, W. Ross, H. Spaling and D. Stalker. 1999. Cumulative Effects Assessment Practitioners Guide. Prepared for: Canadian Environmental Assessment Agency. Available: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/cumulative-effects-assessment-practitioners-guide.html

Holm, E., Mandrak, N.E., Burridge, M. 2009. The Royal Ontario Museum Field Guide to Freshwater Fishes of Ontario. Royal Ontario Museum. 462 pp.

Impact Assessment Agency of Canada (the Agency). 2020. Guide to Preparing an Initial Project Description and a Detailed Project Description. Available: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guide-preparing-project-description-detailed-project-description.html

Impact Assessment Agency of Canada (the Agency). 2021a. Draft Agreement to Conduct a Regional Assessment in the Ring of Fire Area. Available: https://iaac-aeic.gc.ca/050/documents/p80468/142280E.pdf

Impact Assessment Agency of Canada (the Agency). 2021b. Practitioner's Guide to Federal Impact Assessments under the Impact Assessment Act. Accessed November 11, 2021. Available:

https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act.html

J.D. Mollard and Associates (2010) Limited (JDMA). 2019. Webequie Supply Road: Field Investigation of Peat Thickness and Potential Aggregate Sources.

Kashechewan First Nation (KFN). 2022. Kashechewan First Nation Review and Comments on the Norther Road Link Project. Letter from Chief Gaius Wesley (Kashechewan First Nation) to Angela Brooks (Project Manager, SNC-Lavalin) and Laura Drumbell (Intermediate Panner, SNC-Lavalin). January 14, 2022.

KBM Resources Group (KBM). 2019a. Marten Falls First Nation Industrial Supply Road Hydrogeology Baseline Study. Draft. Prepared for AECOM. December 13, 2019.

KBM Resources Group (KBM). 2019b. Marten Falls First Nation Industrial Supply Road Surface Water Quantity and Quality Baseline Studies. Draft. Prepared for AECOM. December 13, 2019.

KBM Resources Group and EDI Environmental Dynamics Inc. (KBM and EDI). 2019. Marten Falls First Nation Industrial Supply Road Fish Habitat Baseline Study. Draft. Prepared for AECOM. December 13, 2019.

KGS Group (KGS). 2020a. Environmental Assessment and Preliminary Design Services for Martin Falls Community Access Road Aggregate Resources Report – Draft Rev A. (KGS Group Project: 19-0194-001). September 2020.

KGS Group (KGS). 2020b. Environmental Assessment and Preliminary Design Services for Marten Falls Community Access Road – Geotechnical Report. Prepared for AECOM Canada Ltd. Draft Rev A. September 2020.

Knight, E., Hannah, K., Brigham, M., McCracken, J., Falardeau, G., Julien, M-F., and Jean-Sébastien Guénette. 2019. Canadian Nightjar Survey Protocol. 21pp.

Knight Piésold Consulting. 2013. Noront Eagle's Nest Project Federal/Provincial Environmental Impact Statement/Environmental Assessment Report – Draft.

Konze, Karl; McLaren, Margaret A. 1997. Wildlife Monitoring Programs and Inventory Techniques for Ontario. Ministry of Natural Resources.

Kuokkanen, R., 2011. From indigenous economies to market-based self-governance: A feminist political economy analysis. Canadian Journal of Political Science/Revue canadienne de science politique, Volume 44 Issue 2, Pages: 275-297.

Kurdyak, P., Jacob, B., Zaheer, J. and Fischer, B., 2018. Patterns of methadone maintenance treatment provision in Ontario: Policy success or pendulum excess?. Canadian Family Physician, Volume 64 Issue 2, Pages: e95-e103.

Lee, H. & Bakowsky, Wasyl & Riley, J. & Bowles, J. & Puddister, M. & Uhlig, P. & Mcmurray, S., 1998. Ecological Land Classification for Southern Ontario: First Approximation and Its Application.

Lynch-Stewart. 2004. Environmental Assessment (EA) Best Practice Guide for Wildlife at Risk in Canada. Available: https://publications.gc.ca/site/eng/476576/publication.html

Marten Falls First Nation (MFFN). 2017. Marten Falls All-Season Community Access Road – Preferred Route Selection and Preliminary Environmental Work – Project Proposal. Prepared by the Chief and Council Marten Falls First Nation. May 10, 2017.

Marten Falls First Nation (MFFN). 2020. Guiding Principles of the Marten Falls First Nation Community Based Land Use Planning Team for Project Planning and Engagement. Available: http://www.martenfallsaccessroad.ca/guiding-principles/

Marten Falls First Nation and Webequie First Nation (MFFN and WFN). 2022. Northern Road Link Proposed Terms of Reference. Prepared by SNC-Lavalin Inc. and Dillon Consulting Limited. April 2022.

Martini, I.P., 1988. The Hudson Bay Lowland: major geologic features and assets. In Coastal Lowlands Springer, Dordrecht. Pages: 23-34.

Métis Nation of Ontario (MNO). 2014. MNO signs General Relationship Agreement with Municipality of Greenstone. Available: https://www.metisnation.org/news/mno-signs-general-relationship-agreement-with-municipality-of-greenstone-1/

Métis Nation of Ontario (MNO). 2021. The Métis Nation of Ontario. Website. Available: https://www.metisnation.org/about-the-mno/

Ministry of Culture. 2005. Heritage Resources in the Land use Planning Process. Availabe: http://www.mtc.gov.on.ca/en/publications/Heritage_Tool_Kit_Heritage_PPS_infoSheet.pdf

Minister of the Environment (Ontario) and Minister of the Environment (Canada). 2004. Canada-Ontario Agreement on Environmental Assessment Cooperation (2004). Available: https://www.canada.ca/en/impact-assessment-agency/corporate/acts-regulations/legislation-regulations/canada-ontario-agreement-environmental-assessment-cooperation-2004.html

Minister of the Environment, Conservation and Parks, Marten Falls First Nation and Webequie First Nation (MECP, MFFN and WFN). 2020. Voluntary Agreement. Signed on October 28, 2020. Available: https://w ww.ontario.ca/page/northern-road-link-project#section-3

Ministry of Indigenous Affairs 2021. Draft guidelines for ministries on consultation with Aboriginal peoples related to Aboriginal rights and Treaty rights. Available: https://www.ontario.ca/page/draft-guidelines-ministries-consultation-aboriginal-peoples-related-aboriginal-rights-and-treaty. Last accessed: July 2022.

Ministry of Infrastructure (MOI). 2017. Building Better Lives: Ontario's Long-Term Infrastructure Plan 2017. Available: https://www.ontario.ca/document/building-better-lives-ontarios-long-term-infrastructure-plan-2017

Ministry of Infrastructure and Ministry of Northern Development, Mines and Forestry (MOI and MNDMF). 2011. The Growth Plan for Northern Ontario. Available: https://www.ontario.ca/document/growth-plan-northern-ontario

Ministry of Mines (MINES). 2022. Ring of Fire. Accessed: December 21, 2022. Available: Ontario's Ring of Fire | ontario.ca

Ministry of Municipal Affairs and Housing. 2020. Provincial Policy Statement, 2020. Under the *Planning Act.*

Ministry of Natural Resources (MNR). 2000. Significant Wildlife Habitat Technical Guide. Available: https://docs.ontario.ca/documents/3620/significant-wildlife-habitat-technical-guide.pdf

Ministry of Natural Resources (MNR). 2010. Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales – Background and Rationale for Direction. Last accessed: July 2022. Available: https://docs.ontario.ca/documents/2787/guide-standsitescales-bkgndrational-aoda.pdf

Ministry of Natural Resources (MNR). 2011. Bats and bat habitats: Guidelines for wind power projects. Last accessed: July 2022. Available: https://www.ontario.ca/page/bats-and-bat-habitats-guidelines-wind-power-projects

Ministry of Natural Resources (MNR). 2012. Guide for the Avoidance Alternatives Form for activities that may require an overall benefit permit under clause 17(2)(c) of the *Endangered Species Act*. Available: https://forms.mgcs.gov.on.ca/dataset/55df778b-aed8-4fbc-9e9f-b6e2c9abfde6/resource/e35d828f-c129-4432-bb17-88d0a93bdf96/download/0178e_guide.pdf

Ministry of Natural Resources and Forestry (MNRF). 2015. Significant Wildlife Habitat Criteria Schedules For Ecoregion 3E. South Porcupine, Ontario, Canada. Last accessed: July 2022. Available: https://docs.ontario.ca/documents/4813/schedule-3e-2015-final-s.pdf

Ministry of Natural Resources and Forestry (MNRF). 2016. Best management practices for aggregate activities and forest-dwelling Woodland Caribou. Last accessed: July 2022. Available: https://www.ontario.ca/page/best-management-practices-aggregate-activities-and-forest-dwelling-woodland-caribou

Ministry of Natural Resources and Forestry (MNRF). 2017a. Significant Wildlife Habitat Criteria Schedules for Ecoregion 3W (Draft). Northwest Region Resources Section, Thunder Bay. 65 pp.

Ministry of Natural Resources and Forestry (MNRF). 2017b. Survey Protocol for Species at Risk Bats within Treed Habitats: Little Brown Myotis, Northern Myotis & Tri-Coloured Bat. Ontario Ministry of Natural Resources and Forestry. Guelph District.

Ministry of Natural Resources and Forestry (MNRF). 2022a. Abandoned Mine Information System (AMIS) GIS Layer. https://www.geologyontario.mndm.gov.on.ca/AMIS_Description.html#:~:text=The%20Abandoned%20Mines%20information%20system,within%20the%20province%20of%20Ontario

Ministry of Natural Resources and Forestry (MNRF). 2022b. Land Use Planning Process in the Far North. Accessed: December 21, 2022. Available: Land use planning process in the Far North | ontario.ca

Ministry of Natural Resources and Forestry and Fisheries and Oceans Canada (MNRF and DFO). 2020. Ministry of Natural Resources and Forestry and Fisheries and Oceans Canada protocol for the review and approval of forestry water crossings. Last accessed: July 2022. Available: https://www.ontario.ca/document/ministry-natural-resources-and-forestry-and-fisheries-and-oceans-canada-protocol-review-and-approval

Ministry of the Environment (MOE). 1978a. Model Municipal Noise Pollution Control By-Law – Publication NPC 119 – Blasting.

Ministry of the Environment (MOE). 1978b. Model Municipal Noise Control By-Law – Publication NPC 115) – Construction Equipment Ministry of the Environment (MOE). 2014a. Code of Practice: Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario. Available: https://www.ontario.ca/page/preparing-and-reviewing-terms-reference-environmental-assessments-ontario

Ministry of the Environment (MOE). 2013. Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning (NPC 300). nt.

Ministry of the Environment (MOE). 2014a. Code of Practice: Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario. Available: https://www.ontario.ca/page/preparing-and-reviewing-terms-reference-environmental-assessments-ontario

Ministry of the Environment (MOE). 2014b. Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario. January 2014. Available: https://www.ontario.ca/document/preparing-and-reviewing-environmental-assessments-ontario-0

Ministry of the Environment (MOE). 2014c. Code of Practice: Consultation in Ontario's Environmental Assessment Process. Available: https://www.ontario.ca/page/consultation-ontarios-environmental-assessment-process

Ministry of the Environment and Climate Change (MOECC). 2013. Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning (NPC 300). Last accessed: July 2022. Available: https://www.ontario.ca/page/environmental-noise-guideline-stationary-and-transportation-sources-approval-and-planning

Ministry of the Environment and Climate Change (MOECC). 2017. Considering Climate Change in the Environmental Assessment Process. Available: https://www.ontario.ca/page/considering-climate-change-environmental-assessment-process

Ministry of the Environment and Energy. 1994. Water management: policies, guidelines, provincial water quality objectives.

Ministry of the Environment, Conservation and Parks (MECP). 2020a. Northern Road Link Environmental Assessment. Letter from Kathleen O'Neill (Director, Environmental Assessment Branch, Ministry of Environment, Conservation and Parks) to Chief Cornelius Wabasse (Webequie First Nation) and Chief Bruce Achneepineskum, (Marten Falls First Nation). November 3, 2020.

Ministry of the Environment Conservation and Parks (MECP). 2020b. Ontario's Ambient Air Quality Criteria (AAQC). Available: https://files.ontario.ca/mecp-ambient-air-quality-criteria-list-en-2020-05-01.pdf

Ministry of the Environment, Conservation and Parks (MECP). 2020c. Best Management Practices for Mineral Exploration and Development Activities and Woodland Caribou in Ontario. Last accessed: July 2022. Available: https://www.ontario.ca/page/best-management-practices-mineral-exploration-and-development-activities-and-woodland-caribou

Ministry of the Environment, Conservation and Parks (MECP). 2020d. Best Management Practices for renewable energy, energy infrastructure, and energy transmission activities and Woodland Caribou in Ontario. Last accessed: July 2022. Available: https://www.ontario.ca/page/best-management-practices-renewable-energy-energy-infrastructure-and-energy-transmission-activities

Ministry of the Environment, Conservation and Parks (MECP). 2020e. Eastern Whip-poor-will Ontario Government Response Statement. Last accessed: July 2022. Available: https://files.ontario.ca/mecp-1/mecp-eastern-whip-poor-will-grs-en-2020-09-04.pdf

Ministry of the Environment, Conservation and Parks (MECP). 2021a. Northern Road Link Environmental Assessment. Letter from Kathleen O'Neill (Director, Environmental Assessment Branch, Ministry of Environment, Conservation and Parks) to Chief Cornelius Wabasse (Webequie First Nation) and Chief Bruce Achneepineskum, (Marten Falls First Nation). October 22, 2021.

Ministry of the Environment, Conservation and Parks (MECP). 2021b. Woodland Caribou Recovery Strategy. Last accessed: July 2022. Available: https://www.ontario.ca/page/woodland-caribou-recovery-strategy#:~:text=Inventory%2C%20monitoring%20and%20reporting%20%20%20%20Recovery,%20Provides%20caribou%20sightings%20information%20t%20...%20

Ministry of the Environment, Conservation and Parks (MECP). 2021c. Wolverine Recovery Strategy. Last accessed: July 2022. Available: https://www.ontario.ca/page/wolverine-recovery-strategy#:~:text=%202.3%20Approaches%20to%20recovery%20%201%20Protect,territorial%20and%20federal%20jurisdictions%2C%20between%20ministries...%20More%20

Ministry of the Environment, Conservation and Parks (MECP). 2021d. Moose Management Policy. Last accessed: July 2022. Available: https://www.ontario.ca/page/moose-management-policy#:~:text=Ontario%E2%80%99s%20Moose%20Management%20Policy%20is%20based%20on%20a,inherent%20uncertainties%20and%20risks%20of%20various%20management%20actions

Ministry of Tourism, Culture and Sport (MTCS). 2011. Standards and Guidelines for Consultant Archaeologists. Last accessed: July 2022. Available: https://www.ontario.ca/page/standards-and-guidelines-consultant-archaeologists

National Research Council Canada. 2015. National Fire Code.

Natural Resources Canada (NRCAN). 2019. Fuel Efficiency Benchmarking in Canada's Trucking Industry. Retrieved from: https://www.nrcan.gc.ca/energy/efficiency/transportation/commercial-vehicles/reports/7607

Neegan Burnside Ltd. 2008. Matawa First Nations Tribal Council Winter Road Realignment Study. Draft.

Neegan Burnside Ltd. 2009. Matawa First Nations Tribal Council Winter Road Realignment Study.

Nibinamik First Nation and Webequie First Nation. 2017. All-Season Community Road Study – Phase 2.

Nishnawbe Aski Nation. 2007. Handbook on Consultation in Natural Resource Development.

Noront Resources (Noront). 2022. Projects – Black Thor & Black Label Chromite Deposits. Accessed: February 17, 2022. Available: https://norontresources.com/projects/black-thor-black-label-deposits/

Northern Ontario Business. 2015. Cliffs Terminates Ring of Fire Assessment Process. February 6, 2015. Accessed: November 11, 2021. Available: https://www.northernontariobusiness.com/industry-news/mining/cliffs-terminates-ring-of-fire-assessment-process-370999

Ontario Breeding Bird Atlas. 2021. Instructions for Point Counts, June 2021. Available: https://www.birdsontario.org/wp-content/uploads/Instructions-for-Point-Counts-June-2021.pdf

Ontario Ministry of Transportation (MTO). 1996. A Protocol for Dealing with Noise Concerns During the Preparation, Review and Evaluation of Provincial Highways and Environmental Assessments.

Ontario Ministry of Transportation (MTO). 2002. Standard Practice for Aggregate Resource Evaluation.

Ontario Ministry of Transportation (MTO). 2006. MTO/DFO/MNRF Protocol for Protecting Fish and Fish Habitat on Provincial Transportation Undertakings 2006.

Ontario Ministry of Transportation (MTO). 2008. Highway Drainage Design Standards. January 2008.

Ontario Ministry of Transportation (MTO). 2020a. Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects. Available: https://prod-environmental-registry.s3.amazonaws.com/2020-07/AQGHG%20Guide%20%28May%202020%29.pdf

Ontario Ministry of Transportation (MTO). 2020b. Roadside Design Manual. Highway Standards Branch, Design & Contract Standards Office. Available: http://www.mto.gov.on.ca/phmpmbp/Reference%20Materials/HwyDes-RoadsideDesignManual-May2020.pdf

Ontario Ministry of Transportation (MTO). 2021. Connecting the North: A Draft Transportation Plan for Northern Ontario. March 2021. Available: https://www.ontario.ca/page/connecting-north-draft-transportation-plan-northern-ontario

Ontario Ministry of Transportation (MTO). 2022. Environmental Guide for Noise. Last accessed: July 2022. Available: https://prod-environmental-registry.s3.amazonaws.com/2022-03/Environmental%20Guide%20for%20Noise%20(2022)_1.pdf

Racey, G.D., Harris, A.G., Jegleum, J.K., Foster, R.F., Wickware, G.M. 1996. Terrestrial and Wetland Ecosites of Northwestern Ontario. Ontario Ministry of Natural Resources, Northwest Sci. & Technol. Field Guide. Available: www.cfs.nrcan.gc.ca

Red Sky Métis Independent Nation (RSMIN). 2021. Who is Red Sky Métis Independent Nation?. Available: https://rsmin.ca/about-us

Russell, C., Neufeld, M., Sabioni, P., Varatharajan, T., Ali, F., Miles, S., Henderson, J., Fischer, B. and Rehm, J., 2019. Assessing service and treatment needs and barriers of youth who use illicit and non-medical prescription drugs in Northern Ontario, Canada. PloS one, Volume 14 Issue 12, p.e0225548.

Singer, S.N., Cheng C.K. 2002. An Assessment of the Groundwater Resources of Northern Ontario. Hydrogeology of Ontario Series (Report 2). Environmental Monitoring and Reporting Branch, Ministry of the Environment. 2002.

Sims, R.A., Towill, W.D., Baldwin, K.A., Wickware, G.M. 1997. Ecosystem Classification for northwestern Ontario. Ontario Ministry of Natural Resources, Northwest Sci. & Technol. Field Guide. Available: https://d1ied5g1xfgpx8.cloudfront.net/pdfs/22144.pdf

SNC-Lavalin Inc. (SNC-Lavalin). 2018. Baseline Environmental and Geotechnical Studies: TPA1A Nibinamik-Webequie Community Road, TPA1B Webequie Community Supply Road (for Webequie First Nation). March 31, 2019.

SNC-Lavalin Inc. (SNC-Lavalin). 2020. Webequie Supply Road Environmental Assessment Terms of Reference. Prepared for Webequie First Nation. August 2020.

SNC-Lavalin Inc. (SNC-Lavalin). 2022. Northern Road Link Geotechnical Drilling Program Species at Risk (SAR) Assessment (Rev. 4). February 2022. Completed for MECP Species at Risk Branch.

SNC-Lavalin Inc. and Dillon Consulting Limited (SNC-Lavalin and Dillon). 2022. Northern Road Link Environmental Assessment Consultation and Engagement Plan. Prepared for Marten Falls Frist Nation and Webequie First Nation. April 2022.

Statistics Canada. 2017. Census Profile, 2016 Census. Release date: February 8, 2017. Updated on: June 18, 2019. Available: https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E%20()

Statistics Canada. 2018. Incident-base crime statistics, by detailed violations, police services in Ontario. Table: 53-10-0180-01 (formerly CANSIM 252-0077). Nishnawbe-Aski Nation, Ontario, municipal (35011)(35011). Release date: 2022-08-02. Available: https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=3510018001

Tarnocai, C. 2006. The effect of climate change on carbon in Canadian peatlands. Global and Planetary Change. 53: 222-232.

Taylor. 2000. A Field Guide to Forest Ecosystems of Northeastern Ontario. 2nd Edition. Ontario Ministry of Natural Resources, Northeast Science & Technology.

United States Environmental Protection Agency (US EPA). 2021. AP-42 Emission Factor Database. Available: https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors

United States Fish and Wildlife Service and Canadian Wildlife Service (USFWS and CWS). 1987. Standard operating procedures for aerial waterfowl breeding ground population and habitat surveys in North America. Revised. Laurel Maryland.

Webequie First Nation, Nibinamik First Nation, Neskantaga First Nation and Eabametoong First Nation. 2016. All-Season Community Road Study. Final Report. Prepared by Fox High Impact Consulting, SNC-Lavalin and JD Mollard and Associates Ltd on behalf of the First Nations. June 30, 2016.

Webequie Supply Road (WSR). 2020. Community Approach – Community Approach, Background, Elder's Principles, Three Tier Model. Accessed: November 10, 2021. Available at: https://www.supplyroad.ca/community-approach/#Principles

Workplace Hazardous Materials Information System (WHMIS). 2022. Workplace Hazardous Materials Information System (WHMIS). Available: Workplace Hazardous Materials Information System (WHMIS) - Canada.ca

Wright, D.G., Hopky, G.E. 1998. Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters. Available: Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters (racerocks.ca)

Zoetica Wildlife Research Services (Zoetica). 2019. Marten Falls First Nation All-Season Community Road Project Baseline Report: 2018 Winter Woodland Caribou and Moose Population and Distribution Surveys. Prepared for Marten Falls First Nation. January 2019.

Appendix A

Initial Project Description Concordance with Guide to Preparing an Initial Project Description and a Detailed Project Description under the *Federal Impact Assessment Act, S.C. 2019, c.28*: Annex I - Contents of an Initial Project Description

Requirement		Section of the Initial Project Description
–	For the purposes of subsection 10(1) of the Act, an Initial Project Description must contain the information set out in Schedule 1 of the Information and Management of Time Limits Regulations (detailed below), and: › Must be representative of the project as proposed at the time the information is provided; and › Must include the information related to any option (alternatives) that the proponent is considering in respect of any item in the description of the project.	NRL Initial Project Description – full document
–	Section 6 of the Information and Management of Time Limits Regulations also specifies that any information that is required to be submitted by a proponent under the Act must: › Be in a machine-readable format; and › Include a plain-language summary of the information in English and in French.	NRL Initial Project Description Plain Language Summary – English and French
Part A: General Information		
1	The project's name, type or sector and proposed location.	Section 1 Project Name, Sector and Location
2	The proponent's name and contact information and the name and contact information of their primary representative for the purpose of the description of the project.	Section 2 The Proponent
3	A summary of any engagement undertaken with any jurisdiction or other party, including a summary of the key issues raised and the results of engagement and brief description of any plan for future engagement. This should include any engagement with public or other participants.	Section 3 Consultation and Engagement with Jurisdictions and Other Parties Section 5 EA/IA Consultation and Engagement
4	A list of Indigenous groups that may be affected by the carrying out of the project, a summary of any engagement undertaken with the Indigenous peoples of Canada, including a summary of key issues raised and the results of the engagement, and a brief description of any plan for future engagement.	Section 4 Consultation and Engagement with Indigenous Communities and Groups Section 5 EA/IA Consultation and Engagement
5	Any study or plan relevant to the project that is being or has been conducted of the region where the project is to be carried out, including any Regional Assessment carried out under the Impact Assessment Act, or by any jurisdiction including by or on behalf of an Indigenous governing body, where the study or plan is available to the public. Proponents are advised to contact the Agency during the preparation of an Initial Project Description for information regarding any regional studies that may be relevant.	Section 6 Relevant Studies
6	Any strategic assessment, relevant to the project, that is being or has been carried out under section 95 of the Act. Proponents are advised to contact the Agency during the preparation of an Initial Project Description for information regarding any strategic assessments that may be relevant.	Section 7 Strategic Assessments

Requirement		Section of the Initial Project Description
Part B: Project Information		
7	A statement of purpose of and need for the project, including any potential benefits.	Section 8 Project Purpose and Need
	The purpose of the project is what is to be achieved by carrying out the project, including any objectives the proponent has in carrying out the project.	Section 8.1 Purpose of the Project
	The need for the project is the opportunity that the project is intended to solve or satisfy. That is, the "need for" establishes the fundamental justification or rationale for the project.	Section 8.2 Need for the Project
	The "purpose of" and "need for" the project should be established from the perspective of the project proponent and provide the context for the consideration of alternatives to and alternative means (below).	Section 8 Project Purpose and Need
8	The provisions in the schedule to the *Physical Activities Regulations* describing the project, in whole or in part. Proponents must detail how the project meets the description, threshold (e.g., provide the length of new right of way) and the criteria in any of the other provisions. Indicate whether the designated project is a component of a larger project that is not listed in the Project List.	Section 9 Physical Activities Regulations
9	A list of all activities, infrastructure, permanent or temporary structures and physical works to be included in and associated with the construction, operation, decommissioning of the project.	Section 10 Project Activities, Infrastructure, Permanent or Temporary Structures and Physical Works
	Include existing structures or related activities that will form part of or are required to accommodate or support the designated project.	Section 10.1 Project Infrastructure and Temporary and Permanent Structures
	For example, activities during planning, engineering, site preparation or construction might include, but are not limited to, land clearing, excavating, grading, de-watering, directional drilling, dredging and disposal of dredged sediments, infilling, and installing structures. This list should make a clear distinction between any ongoing activities or existing physical works (e.g., those associated with ongoing advanced exploration) and those that form part of the designated project. This is to include the physical activities that are incidental to the designated project. In determining such activities, the following criteria shall be taken into account: › Nature of the proposed activities and whether they are subordinate or complementary to the designated project; › Whether the activity is within the care and control of the proponent; › If the activity is to be undertaken by a third party, the nature of the relationship between the proponent and the third party and whether the proponent has the ability to "direct or influence" the carrying out of the activity; › Whether the activity is solely for the benefit of the proponent or is available for other proponents as well; and	Section 10.2 Project Activities and Physical Works

Requirement		Section of the Initial Project Description
	› The federal and/or provincial regulatory requirements for the activity.	Section 19 Jurisdictions that Have Powers, Duties or Functions Related to the Project's Environmental Effects
	Should an impact assessment be required for the designated project, the Agency will take these criteria into consideration in determining the activities that are incidental to the designated project.	N/A
	Should the proposed project include transportation activities, information must be provided on where transportation will join established transportation corridors (e.g., site access road connects to municipal road).	Section 10 Project Activities, Infrastructure, Permanent or Temporary Structures and Physical Works
10	An estimate of maximum production capacity of the project and a description of the production processes to be used. Capacity refers to the maximum capacity based on the project's design and operating conditions, not the planned capacity of a project. This information may not be relevant to all project types (e.g., highway, railway line), and the proponent should simply indicate where this is the case. The proponent may instead provide other relevant metrics of project size (e.g., area, length, usage).	Section 11 Estimated Maximum Project Capacity
11	The anticipated schedule for the project's construction, operation, decommissioning, and abandonment, including any expansions of the project. This information should include the schedule for the key activities of the each of those phases. The schedule should also take into account the anticipated time required to conduct the impact assessment, should one be required.	Section 12 Project Schedule
12	A list of potential: a. Alternative means that the proponent is considering and that are technically and economically feasible, including through the use of best available technologies; and	Section 13.1 "Alternatives Means" to Carry Out the Project
	b. Alternatives to the project that the proponent is considering and that are technically and economically feasible, and directly related to the project. The Agency recognizes that a proposed project may be in the early stages of planning when an Initial Project Description is being prepared. Proponents may not have made final decisions and several alternatives may exist for project components (e.g., placement of infrastructure, technologies to be employed). In these situations, proponents are strongly encouraged to identify the alternatives under consideration in the Initial Project Description. Proponents should contact the Agency for further guidance in this area prior to the submission of the Initial Project Description. Alternative means are the various technically and economically feasible ways, including through the use of best available technologies, which would allow a designated project and its physical activities to be carried out.	Section 13.2 "Alternatives to" the Project

Requirement		Section of the Initial Project Description
	Alternatives to the project are functionally different ways to meet the need for the project and achieve its purpose that are technically and economically feasible.	
Part C: Location Information and Context		
Provide a description of the designated project's proposed location including:		Section 14 Location Description
13a	Proposed geographic coordinates including, for linear development projects (e.g., pipelines, transmission lines), the proposed locations of major ancillary facilities that are integral to the project, and a description of the spatial boundaries of the proposed study corridor. Coordinates should be provided in a form suitable for use in GIS (e.g., longitude/latitude) using international standard representation. Coordinates should be appropriate for the project type. For example: for the center of a facility, for the boundaries of a proposed mine site, or for the beginning and end points and path of a linear project.	Section 14.1 Geographic Coordinates
	For linear projects under the *Canadian Energy Regulator Act*, proponents should also provide the extent of the consultation corridor, if it is different from the proposed study corridor.	N/A
	Indicate if you will be using an existing right of way that has been previously used for a different type of linear project.	Section 14 Location Description
13b	Site maps produced at an appropriate scale, in order to determine the project's proposed general location and the spatial relationship of the project components.	Section 14.2 Site Map
13c	The legal description of land to be used for the project, including, if the land has already been acquired, the title, deed or document and any authorization relating to a water lot. The level of detail should be appropriate for the project type.	Section 14.3 Legal Description of the Land
13d	The project's proximity to any permanent, seasonal or temporary residences and proximity to the nearest affected communities.	Section 14.4 Proximity to Residences and Nearby Affected Communities
13e	The project's proximity to:	Section 14.5 Proximity to Indigenous Lands
	› Land used for traditional purposes by Indigenous peoples of Canada;	Section 14.5.1 Land Used for Traditional Purposes by Indigenous Peoples of Canada
	› Land in a reserve as defined in subsection 2(1) of the *Indian Act*;	Section 14.5.2 Land in a Reserve as Defined in Subsection 2(1) of the *Indian Act*
	› First Nation land as defined in subsection 2(1) of the *First Nations Land Management Act;*	Section 14.5.3 First Nation Land as defined in Subsection 2(1) of the *First Nations Land Management Act*
	› Land that is subject to a comprehensive land claim agreement or a self-government agreement; and	Section 14.5.4 Land that is Subject to a Comprehensive Land Claim Agreement or a Self-government Agreement

Requirement		Section of the Initial Project Description
	› Any other land set aside for the use and benefit of Indigenous peoples of Canada.	Section 14.5.5 Other Land Set Aside for the Use and Benefit of Indigenous Peoples of Canada
13f	The project's proximity to any federal lands.	Section 14.6 Proximity to Federal Lands
14	A brief description of the physical and biological environment of the project's location, based on information that is available to the public.	Section 15 Description of the Physical and Biological Environment
15	A brief description of the health, social and economic context in the region where the project is located, based on information that is available to the public and/or derived from any engagement undertaken.	Section 16 Description of the Health, Socio-economic, Cultural Heritage Resources, and Aboriginal and Treaty Rights and Interests Context
Part D: Federal, Provincial, Territorial, Indigenous and Municipal Involvement and Effects		
16	A description of any financial support that federal authorities are, or may be, providing to the project.	Section 17 Financial Support from Federal Authorities
17	A list of any federal land that may be used for the purpose of carrying out the project.	Section 18 Use of Federal Lands for the Project
18	A list of any jurisdictions that have powers, duties or functions in relation to an assessment of the project's environmental effects. This may include permits, licenses, or other authorizations that may be required by federal authorities or other jurisdictions. A list of any changes to the environment or to health, social or economic conditions that may occur in Canada that are directly linked or necessarily incidental to the involvement of a federal authority that would permit or enable the project to be carried out in whole or in part.	Section 19 Jurisdictions that Have Powers, Duties or Functions Related to the Project's Environmental Effects
Part E: Potential Effects of the Project		
19	A list of any changes that, as a result of the carrying out of the project, may be caused to the following components of the environment that are within the legislative authority of Parliament:	Section 20 Fish and Fish Habitat, Aquatic Species and Migratory Birds
	a. Fish and fish habitat as defined in subsection 2(1) of the *Fisheries Act*;	Section 20.1 Potential Changes to Fish and Fish Habitat under the *Fisheries Act* Appendix F (Summary of Potential Effects and Preliminary Proposed Mitigation Measures)
	b. Aquatic species, as defined in subsection 2(1) of the *Species at Risk Act (marine plants)*; and	Section 20.2 Potential Changes to Aquatic Species under the *Species at Risk Act* (Marine Plants) Appendix F (Summary of Potential Effects and Preliminary Proposed Mitigation Measures)

Requirement		Section of the Initial Project Description
	c. Migratory birds, as defined in subsection 2(1) of the *Migratory Birds Convention Act*, 1994.	Section 20.3 Potential Changes to Migratory Birds under the *Migratory Birds Convention Act*, 1994 Appendix F (Summary of Potential Effects and Preliminary Proposed Mitigation Measures)
20	A list of any changes to the environment that, as a result of carrying out the project, may occur: › On federal lands; › In a province other than the province in which the project is proposed to be carried out; or › Outside of Canada.	Section 21 Federal Lands, Other Provinces and Outside of Canada
21	With respect to Indigenous peoples of Canada, a brief description of any impact – that, as a result of the carrying out of the project, may occur in Canada and result from any change to the environment – on:	Section 22 Indigenous Physical and Cultural Heritage, Current Use of Lands and Resources for Traditional Purposes, and Archaeological Resources
	› Physical and cultural heritage;	Section 22.1 Cultural Heritage Resources Appendix F (Summary of Potential Effects and Preliminary Proposed Mitigation Measures)
	› The current use of lands and resources for traditional purposes, and	Section 22.2 Aboriginal and Treaty Rights and Interests Appendix F (Summary of Potential Effects and Preliminary Proposed Mitigation Measures)
	› Any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.	Section 22.1 Cultural Heritage Resources Appendix F (Summary of Potential Effects and Preliminary Proposed Mitigation Measures)
22	A brief description of any change that, as a result of the carrying out of the project, may occur in Canada to the health, social or economic conditions of Indigenous peoples of Canada, based on information that is available to the public or derived from any engagement undertaken with the Indigenous peoples of Canada.	Section 23 Indigenous Health, Social and Economic Conditions Section 23.1 Human Health Section 23.2 Socio-Economic Environment Appendix F (Summary of Potential Effects and Preliminary Proposed Mitigation Measures)
23	An estimate of any greenhouse gas (GHG) emissions associated with the project. This should be calculated as the net GHG emissions associated with the project and estimated based on the information available to proponents at this stage. For guidance on the calculation of GHG emissions see the draft Strategic Assessment of Climate Change developed by Environment and Climate Change Canada: https://www.strategicassessmentclimatechange.ca/	Section 26 Greenhouse Gas Emissions Estimate

Requirement		Section of the Initial Project Description
24	A list of the types of waste and emissions that are likely to be generated - in the air, in or on water and in or on land - during any phase of the project.	Section 27 Waste, Discharges and Emissions
Part F: Summary		
25	A plain-language summary of the information in parts A to E is required in English and in French.	NRL Initial Project Description Plain Language Summary – English and French

A.1 References

Impact Assessment Agency of Canada. 2020. Guide to Preparing an Initial Project Description and a Detailed Project Description. Accessed December 6, 2021. Available: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/guide-preparing-project-description-detailed-project-description.html

Appendix B

List of Stakeholders that Received Letter of Notification Advising of the Notice of Commencement of the Terms of Reference

Elected Officials

- House of Commons

Emergency Medical Services and Law Enforcement Agencies

- Kenora District Services Board (Andrew Tickner, Barry Baltessen)
- Nishnawbe Aski Police Service (Alex Missewace)
- Ontario Provincial Police (Abisola Akinwumi)
- Pickle Lake Fire Department
- Superior North EMS (Wayne Gates)
- Thunder Bay Fire Rescue (John Hay)
- Thunder Bay Police Service

Forest Industry and Forest Management Companies

- Ne-Daa Kii-Me Naan Inc. (Scott Boone)
- Green Forest Management (Richard Shwedack)

Government Review Team (GRT)

- Impact Assessment Agency of Canada (Lorraine Cox)
- Ministry of the Solicitor General (Robert Greene)
- Ministry of Economic Development, Job Creation and Trade (Shireen Mohammed, Michael Helfinger)
- Ministry of Energy, Northern Development and Mines (now Ministry of Mines) (Ariane Heisey)
- Ministry of Heritage, Sport, Tourism and Culture Industries (now Ministry of Tourism, Culture and Sport, and Ministry of Citizenship and Multiculturalism) (James Antler, Karla Barboza, Ray Dempster, Bob Freeman)
- Ministry of Municipal Affairs and Housing (Victoria Kosny)
- Ministry of Northern Development, Mines, Natural Resources and Forestry (now Ministry of Northern Development, Ministry of Mines, and Ministry of Natural Resources and Forestry) (Nicole Gross, Jessica Dyczko)
- Ministry of Environment, Conservation and Parks (Sasha McLeod, Dorothy Moszynski)
- Ministry of Transportation (Jennifer Fisk)

Mining Claim Holders

- Abitibi Royalties Inc. Val D'Or
- Aurcrest Gold Inc.
- Canada Chrome Corporation
- Clark Exploration and Consulting Inc.
- De Beers Canada Inc.
- Debut Diamonds Inc.
- Fancamp Exploration (Debra Chapman)
- KWG Resources Inc. (Frank Smeenk, More Lavigne)
- Macdonald Mines Exploration Ltd.
- Metalex Ventures Ltd.
- Noront Muketei Minerals Ltd. (Gregory Rieveley, Alan Coutts)
- Noront Resources Ltd. (now Ring of Fire Metals) (Mark Baker, Mike Desilets)
- Superior Exploration Ltd. (Kimberley and Steven Siemienuiuk)
- Wabassi Resources Inc. (Richard Sutcliffe)

Municipalities and Municipal Agencies

- City of Thunder Bay (Bill Mauro, Norm Gale, Krista Power, Greg Hankkio)
- City of Timmins (George Pirie, Dave Landers, Steph Palmateer)
- Municipality of Greenstone (Renald Beaulieu, Gabrielle Lecuyer, Mark Wright)
- Municipality of Pickle Lake (Dwight Monck, Tanis Janasson)
- Municipality of Greenstone – Fire Services
- Sioux Lookout (Doug Lawrence)

Provincial and Federal Government Agencies (non-GRT)

- Crown Indigenous Relations and Northern Affairs Canada (Jody Knibbs, Jerome Cardin-Tremblay, Lauren Peirce, David Snowdon, Jeanne Strasbourg)
- Department of Fisheries and Oceans Canada
- Employment and Social Development Canada (Kristen Loffler)
- Health Canada (Aurelia Thevenot, Kitty Ma, Julie Boudreau, Dae Y Lee)
- Indigenous Services Canada (Debra Nkusi)
- Infrastructure Canada
- Natural Resource Canada (Walker Smith)
- Transport Canada (David Zeit)

Provincial and Federal Members of Parliament

- MP Kenora (Eric Melillo)
- MP Timmins-James Bay (Charlie Angus)
- MP Thunder Bay – Rainy River (Macus Powlowski)
- MP Thunder Bay – Superior North (Patty Hajdu)
- MPP for Kenora-Rainy River (Greg Rickford)
- MPP for Kiiwetinoong (Sol Mamakwa)
- MPP for Mushkegowuk-James Bay (Guy Bourgouin)
- MPP for Timmins (Gilles Bisson)
- MPP for Thunder Bay – Atikokan (Judith Monteith-Farrel)
- MPP for Thunder Bay – Superior North (Michael Gravelle)

Provincial Parties

- Liberal Ontario
- Ontario New Democratic Party

Public and Catholic School Boards

- Lakehead District School Board (Deborah Massaro)
- Superior – Greenstone District School Board (Pauline Mcrae)
- Superior North Catholic School Board (Maria Vasanelli)
- Thunder Bay Catholic District School Board (Kathy O'Brien)

Trapline Holders

- Licenced Trappers (n=7)

Other Stakeholders

- 7 Lakes Wilderness camps
- Boreal Forest Outfitters
- District of Cochrane (Brian Marks)
- District of Thunder Bay Social Services Administration Board (Bill Bradica)
- Dusey River Adventures
- Friends of Attawapiskat River (Canadian Environmental Law Association)
- Geraldton Area Natural Resources Advisory Committee (Evan Armstrong)
- Geraldton Chamber of Commerce (Tanner Bell, Eric Pietsch)
- Golden Share Resource Corporation (Nick Zeng)
- Gray Wood Outfitters (Eddie North's Adventures) (Andrew and Monica Grey, Adam and Caroline Wood)
- Greenstone District Trappers Council (Brian Deroschers)
- Greenstone Economic Development Corporation (Frank Hildebrandt)
- Greenstone Snowmobile Club (Eric Corbin)
- Hydro One Networks Inc.
- Labourer's International Union of North America (Shane Fugere)
- Leuenberger Air Service (Jamie Sofonoff)
- LH Crane (Norm Gornie)
- LH North Ltd. (Dantis Ullas Muthuklalthil)
- Mining Watch
- Nakina Air Service
- Nakina North Outfitters (Mark Cassidy)
- North of Superior Trapping Association (Jeff MacDonald)
- Northwestern Ontario Municipal Association (Rick Dumas)
- Northwestern Ontario Snowmobile Trails Association
- O'Sullivan Lake Outfitters (Howard and Elsie Meshake)
- O'Sullivan Rainbow Lodge (Bob Richard)
- Ontario Federation of Anglers and Hunters (Zone B) (Carmen Woodcock)
- Outland (David Bradley)
- Twin Lake Outfitters (Chad Haakenson)
- Vision Mining Solutions (David Boyer)
- Wilderness North (Alan Cheesman)
- Wilderness Outfitters / Leuenberger's Fly-In Lodge and Wilderness Outposts
- Wildlife Conservation Society Canada (Claire Farrell)

Appendix C

Additional Information on Consultation and Engagement with Jurisdictions and Other Parties

Table C-1: Consultation and Engagement by Agency

Date	Description of Activity	Results/Feedback Received
Federal Authorities		
Crown Indigenous Relations and Northern Affairs Canada		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR letter sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Department of Fisheries and Oceans Canada		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR letter sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Employment and Social Development Canada		
May 4, 2021	ToR Notice of Commencement letter sent.	__
May 28, 2021	Indigenous & Community Engagement (ICE) received returned mail from Employment and Social Development Canada, stamped 'moved'– Notice of Commencement Letter.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
September 28, 2021	The proponent received returned mail on the Notice of Open House to Employment and Social Development Canada.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Health Canada		
May 4, 2021	ToR Notice of Commencement letter sent.	__
May 11, 2021	Contact Form sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__

Date	Description of Activity	Results/Feedback Received
November 24, 2021	Notice of Draft ToR sent.	Health Canada responded that they did not receive a request from a reviewing body (e.g., Impact Assessment Agency of Canada, review panels, Indigenous groups and/or other jurisdictions) to review the Draft ToR and therefore is unable to review it, but will continue to participate in the EA/IA of the Project via the federal process.
February 11, 2022	Notice of Open House #2 sent.	—
House of Commons		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 24, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Impact Assessment Agency of Canada (IAAC)		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
July 27, 2021	IAAC Introductory meeting.	—
September 1, 2021	NRL timelines and coordination meeting.	—
November 22, 2021	Notice of Draft ToR sent.	—
January 7, 2022	Email regarding the Draft ToR.	On January 7, 2022, the Agency provided review comments on the Draft ToR.
January 20, 2022	Meeting on Approaches to AI on rights regarding MFCAR and WSR.	—
January 28, 2022	Email regarding the Impact Assessment for NRL and the Regional Assessment in the Ring of Fire Area.	—
February 1, 2022	Email regarding the Impact Assessment process.	—
February 11, 2022	Meeting to discuss IAAC steps for submission of an Initial Project Description (IPD) with regards to the submission portal, IPD Summary, French translation and hard copies.	—
February 11, 2022	Notice of Open House #2 sent.	—
Indigenous Services Canada (ISC)		
June 17, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—

Date	Description of Activity	Results/Feedback Received
January 7, 2022	Email from Indigenous Services Canada requesting additional time to submit comments on the Draft ToR. Comments were requested by January14, 2022.	Additional time until January 31, 2022 was provided for Indigenous communities to review the Draft ToR.
February 11, 2022	Notice of Open House #2 sent.	__
Infrastructure Canada		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Transport Canada		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent	__
Provincial Agencies, Interested Provincial Organizations and Members of Parliament		
Liberal Ontario		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Ministry of Economic Development, Job Creation and Trade		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) (now Ministry of Tourism, Culture and Sport [MTCS], and Ministry of Citizenship and Multiculturalism [MCM])		
May 4, 2021	ToR Notice of Commencement letter sent.	__
June 7, 2021	Contact form sent.	__

Date	Description of Activity	Results/Feedback Received
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	On October 25, 2021, MHSTCI responded to the Notice of Commencement and expressed interest in the Environmental Assessment process as it relates to their mandate of archaeological resources, land and marine, built heritage resources, and cultural heritage landscapes. They advised for a potential archaeological assessment/cultural heritage report and provided contact information.
July 6, 2021	Additional contact form sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	On January 12, 2020, MHSTCI provided comments on the Draft ToR and recommended including a description of the cultural component of the existing environment; Technical cultural heritage studies will need to be conducted.
January 20, 2022	MHSTCI sent an email requesting additional team members to be on the distribution list for the Project and be included on information about the bi-weekly Radio Session and Live Streaming series.	The proponent included MHSTCI's additional team members on the distribution list for the Project and on information about the bi-weekly Radio Session and Live Streaming series.
February 11, 2022	Notice of Open House #2 sent.	__
Ministry of Innovation, Science and Economic Development Canada (ISED)		
February 11, 2022	Notice of Open House #2 sent.	__
Ministry of Municipal Affairs and Housing		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) (now Ministry of Northern Development, Ministry of Mines [MINES], and Ministry of Natural Resources and Forestry [MNRF])		
May 4, 2021	ToR Notice of Commencement letter sent.	__
May 12, 2021	Consultation workshop on Protocols/Consultation Process, Road Proponency and MOU.	Reviewed Ontario's consultation requirements, including statutory consultation, participant funding, NDMNRF and MECP roles with respect to consultation and the Indigenous communities to be consulted.

Date	Description of Activity	Results/Feedback Received
May 19, 2021	Consultation workshop on the Environmental Assessment and the Protocols/Consultation Process.	Discussed the proposed consultation process for the Project, including approach, consultation undertaken to date, the approach to the Memorandum of Understanding (MOU) on shared consultation responsibilities, and lessons learned on consultation processes including WSR and MFCAR MOUs.
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
September 01, 2021	NRL Timelines strategic Environmental Assessment/Impact Assessment Coordination and Project Delivery.	Discussed timelines for submission of the Initial Project Description relative to the provincial planning phase milestones and how to best align the two processes.
November 22, 2021	Notice of Draft ToR sent.	On January 19, 2022, NDMNRF sent an email with comments on the Draft ToR regarding the Environmental Assessment, the Protocols/Consultation Process, Traditional Knowledge, Regional Assessment in the Ring of Fire Area and the implications of COVID-19.
January 21, 2022	Meeting with ICE, SNC-Lavalin, Dillon Consulting, the proponent, Ministry of Energy Northern Development and Mines (ENDM) and Ministry of Transportation (MTO) to confirm the proposed design criteria and road classification for the Project with MTO before the design was commenced.	Discussed the proposed Project's design criteria and the potential discrepancies with design criteria for other road projects due to updated standards.
February 2, 2022	Email sent to NDMNRF regarding NRF comments that were empty, and if this was an error and is for the proponent to consider the additional resources in the Recommendations/Preliminary conclusions' comment column.	On February 8, 2022, MNDMNR confirmed that the intent was for the proponent to consider the additional resources provided in the recommendations/preliminary conclusions column.
February 10, 2022	Notice of Open House #2 sent.	—
February 10, 2022	Meeting to discuss comments on the Draft ToR.	Discussed MECP comments regarding alternatives and ancillary infrastructure.
February 11, 2022	Meeting with Ministry of Environment, Conservation and Parks (MECP) to describe the ToR comment referral process.	MECP outlined the expected process for referring comments from Indigenous communities to MECP.

Date	Description of Activity	Results/Feedback Received
February 15, 2022	Email sent to NDMNRF regarding clarification on a statement that was not present in the Draft ToR.	On March 3, 2022, NDMNRF responded that this was an error and this comment does not require a response.
February 15, 2022	Meeting with MECP to discuss how to address review comments on the Draft ToR alternatives chapter.	Edits to the alternatives chapter are needed to provide more information on the alternative corridors that were previously eliminated from consideration. This includes how criteria such as species at risk/habitat were considered and addition of tables to compare various criteria/factors for these alternatives. The proponent will send the draft edits to MECP for review prior to finalizing.
February 25, 2022	Email informing of an upcoming Live Stream and radio call show to be held on March 2, 2022.	—
March 11, 2022	Email informing of an upcoming Live Stream and radio call show to be held on March 16, 2022.	—
March 25, 2022	Email informing of an upcoming Live Stream and radio call show to be held on March 30, 2022.	—
Ministry of the Environment, Conservation and Parks		
May 4, 2021	ToR Notice of Commencement letter sent.	—
May 12, 2021	Consultation workshop on Protocols/Consultation Process, Road Proponency and MOU.	Reviewed Ontario's consultation requirements, including statutory consultation, participant funding, NDMNRF and MECP roles with respect to consultation and the Indigenous communities to be consulted.
May 19, 2021	Consultation workshop on the Environmental Assessment and the Protocols/Consultation Process.	Discussed the proposed consultation process for the Project, including approach, consultation undertaken to date, the approach to the Memorandum of Understanding (MOU) on shared consultation responsibilities, and lessons learned on consultation processes including WSR and MFCAR MOUs.
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
September 01, 2021	NRL Timelines strategic Environmental Assessment/Impact Assessment Coordination and Project Delivery.	Discussed timelines for submission of the Initial Project Description relative to the provincial planning phase milestones and how to best align the two processes.

Date	Description of Activity	Results/Feedback Received
November 18, 2021	Sent a hard copy of the Draft ToR and a USB with associated submission documents to the Ministry of Environment, Conservation and Parks.	—
November 22, 2021	Notice of Draft ToR sent.	› On December 2, 2021, MECP provided comments on the Draft ToR by the Waste Unit. › On January 4, 2022, MECP provided comments on the Draft ToR by the Indigenous Advisor. › On January 6, 2022, MECP provided comments on the Draft ToR by the Environmental Monitoring and Reporting Branch. › On January 7, 2022, MECP provided comments on the Draft ToR by Ontario Parks. › On January 7, 2022, MECP provided comments on the Draft ToR by the Surface Water Specialist and by the Surface Water Specialist. › On January 10, 2022, MECP provided comments on the Draft ToR by the Species at Risk Branch. › On January 11, 2022, MECP provided comments on the Draft ToR by the Environmental Assessment Branch. › On January 11, 2022, MECP provided comments on the Draft ToR by the Climate Change Policy Branch. › On January 11, 2022, MECP provided comments on the Draft ToR by the Groundwater Unit, confirming they had no comments. › On March 17, 2022, MECP provided additional comments on the Draft ToR by the Environmental Assessment Branch.
December 1, 2021	Email regarding NRL Consultation Leads and Draft ToR.	—
January 11, 2022	Email regarding the Memorandum of Understanding (MOU) on Shared Consultation Responsibilities between Ontario and the Project proponents.	—

Date	Description of Activity	Results/Feedback Received
January 12, 2022	Email regarding that MECP has no further outstanding comments on the Draft ToR.	—
January 20, 2022	Email inquiring about the timeline for completion of Draft ToR comment responses, asking if further clarification on MECP comments is needed.	On January 20, 2022, the proponent responded that the team is still evaluating the MECP comments and are unsure of timelines for the turnaround of comments.
February 4, 2022	Email notification that MECP would be responding to a letter received from Aroland First Nation (AFN) dated October 7, 2021 regarding concerns related to the inadequate scope of the Environmental assessments (EAs) for the Webequie Supply Road (WSR) and the Marten Falls Community Access Road (MFCAR). The letter also noted concerns related to how the introduction of the Project would significantly impact ARFN's territory.	—
February 10, 2022	Meeting to discuss comments on the Draft ToR.	Discussed MECP comments regarding alternatives and ancillary infrastructure.
February 11, 2022	Meeting with MECP to describe the ToR comment referral process.	MECP outlined the expected process for referring comments from Indigenous communities to MECP.
February 11, 2022	Notice of Open House #2 sent.	—
February 15, 2022	Meeting to discuss how to address MECP comments on NRL route alternative.	Edits to the alternatives chapter are needed to provide more information on the alternative corridors that were previously eliminated from consideration. This includes how criteria such as species at risk/habitat were considered and addition of tables to compare various criteria/factors for these alternatives. The proponent will send the draft edits to MECP for review prior to finalizing.
February 16, 2022	Email regarding detailed ToR submission instructions, submission dates and key timelines.	—
Ministry of the Solicitor General		
May 5, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—

Date	Description of Activity	Results/Feedback Received
Ministry of Transportation (MTO)		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
January 7, 2022	Email stating the stakeholder had no concerns at this time with the Draft ToR.	__
January 21, 2022	Meeting to confirm the proposed design criteria and road classification for the Project with MTO before the design was commenced.	Discussed the proposed Project's design criteria and the potential discrepancies with design criteria for other road projects due to updated standards.
February 11, 2022	Notice of Open House #2 sent.	__
Member of Parliament (MP) for Timmins-James Bay		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
MP Thunder Bay – Rainy River		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
MP Thunder Bay – Superior North		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Member of Provincial Parliament (MPP) for Kenora – Rainy River		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__

Date	Description of Activity	Results/Feedback Received
MPP for Kiliwetinoong		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
MPP for Mushkegowuk – James Bay		
May 4, 2021	ToR Notice of Commencement letter sent.	__
May 5, 2021	ToR Notice of Commencement letter sent to additional recipients.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
MPP for Timmins		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
MPP Thunder Bay – Atikokan		
May 4, 2021	ToR Notice of Commencement letter sent.	__
May 28, 2021	Received returned Notice of Commencement mail stamped ‘No such address’.	__
June 17, 2021	Received a return to sender mail that included the Notice of Commencement Announcement letter, the ToR and the Project Environmental Assessment.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
MPP Thunder Bay – Superior North		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__

Date	Description of Activity	Results/Feedback Received
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Natural Resource Canada		
May 4, 2021	ToR Notice of Commencement letter sent	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	On July 27, 2021, Natural Resources Canada emailed acknowledgement of receipt of the Notice of Commencement.
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Ontario New Democratic Party		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Ontario Provincial Police		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__

Table C-2: Consultation and Engagement with the Public and Stakeholders

Date	Description of Activity	Results/Feedback Received
Trapper # 1		
July 21, 2021	ToR Notice of Commencement letter sent.	—
August 6, 2021	Indigenous & Community Engagement (ICE) received returned mail. The letter was the Notice of Commencement.	—
December 20, 2021	Indigenous & Community Engagement (ICE) received returned mail. The letter was a Notice of Open House #1 for September 2021.	—
Trapper #2		
July 8, 2021	ToR Notice of Commencement letter sent.	—
Trapper #3		
July 8, 2021	ToR Notice of Commencement letter sent.	—
Trapper #4		
July 8, 2021	ToR Notice of Commencement letter sent.	—
Trapper #5		
July 8, 2021	ToR Notice of Commencement letter sent.	—
Trapper #6		
July 8, 2021	ToR Notice of Commencement letter sent.	—
Aug 6, 2021	Indigenous & Community Engagement (ICE) received returned mail. The letter was the Notice of Commencement.	—
Trapper #7		
July 8, 2021	ToR Notice of Commencement letter sent.	—
Aug 6, 2021	Indigenous & Community Engagement (ICE) received returned mail. The letter was the Notice of Commencement.	—
6398651 Canada Inc.		
November 22, 2021	Notice of Draft ToR sent.	—
7 Lakes Wilderness Camps		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Abitibi Royalties Inc. Val D'Or		
May 5, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—

Date	Description of Activity	Results/Feedback Received
February 11, 2022	Notice of Open House #2 sent.	—
February 11, 2022	Abitibi Royalties informed the proponent that Abitibi Royalties has been acquired by Gold Royalty Corp and instructing to contact Valdor mining email address.	—
Aditya – Birla, Columbia Forest Products		
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Arctic Watershed Outposts		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
July 21, 2021	Arctic Watershed Outposts provided a contact form with comments on choosing road/waterway crossings, in order to have protection from possible easy access to tourist camps.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Aurcrest Gold Inc.		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Boreal Forest Outfitters		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Canada Chrome Corporation		
May 5, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 9, 2021	The proponent emailed the stakeholder regarding the geotechnical drilling program to support the Environmental assessment (EA) for the Project, and noted there will be borehole drilling and groundwater monitoring wells installed. The letter included a Consent Form for a Permit under the *Public Lands Act,* and included maps of proposed locations and a drilling schedule.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—

Date	Description of Activity	Results/Feedback Received
Canadian Environmental Law Association (Friends of the Attawapiskat River)		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
City of Thunder Bay		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
City of Timmins		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Clark Exploration and Consulting Inc.		
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
De Beers Canada Inc.		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Debut Diamonds Inc.		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
September 24, 2021	Received returned Mail regarding the Notice of Open House.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__

Date	Description of Activity	Results/Feedback Received
District of Cochrane		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
District of Thunder Bay Social Services Administration Board		
May 5, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Dusey River Adventures		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 24, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Fancamp Exploration Ltd.		
May 5, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 9, 2021	The proponent emailed the stakeholder regarding the geotechnical drilling program to support the Environmental assessment (EA) for the Project, and noted there will be borehole drilling and groundwater monitoring wells installed. The letter included a Consent Form for a Permit under the *Public Lands Act,* and included maps of proposed locations and a drilling schedule.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Four Rivers		
December 10, 2021	Left a voicemail for the stakeholder to follow-up on the Draft ToR, with comments due by January 8, 2022.	—
December 14, 2021	Sent an email to the stakeholder to confirm receipt of the Notice of Draft ToR, with comments to be submitted by January 8, 2022.	—
Geraldton Area Natural Resources Advisory Committee		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—

Date	Description of Activity	Results/Feedback Received
Geraldton Chamber of Commerce		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
July 12, 2021	Received a completed contact form from the stakeholder.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Golden Share Resource Corporation		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Gray Wood Outfitters (Eddie North's Adventures)		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Green Forest Management		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Greenstone District Trappers Council		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Greenstone Economic Development Corporation		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Greenstone Public Library Elsie Dugard Centennial Public Library Branch		
November 20, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__

Date	Description of Activity	Results/Feedback Received
Greenstone Public Library Longlac Public Library Branch		
November 20, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Greenstone Snowmobile Club		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Hydro One Networks Inc.		
May 13, 2021	ToR Notice of Commencement letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Kenora District Services Board		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
KWG Resources Inc.		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Labourer's International Union of North America		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Lakehead District School Board		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__

Date	Description of Activity	Results/Feedback Received
Leuenberger Air Service		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
LH Crane		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
LH North Ltd.		
May 5, 2021	ToR Notice of Commencement letter sent.	__
May 7, 2021	Received a completed contact form for stakeholder.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Longlac Chamber of Commerce		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Macdonald Mines Exploration Ltd.		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Media-Radio-TV, Print, Virtual		
January 28, 2021	Sent an email to Newswire on behalf of MFFN and WFN as a press release to an EA to be completed during 2024. Press release included a brief description of SNC-Lavalin and Dillon Consulting's experience in the field.	__
April 22, 2021	Public meeting via Live Stream at a community meeting to various communities and the public.	__
May 3, 2021	Press release and media release via email.	__

Date	Description of Activity	Results/Feedback Received
May 4 to 8, 2021	Notice of Commencement of Terms of Reference published in newspapers: Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout Bulletin, Thunder Bay Source, Geraldton Times Star, Anishinabek News, Northern Ontario Business.	—
May 20, 2021	Ran a 20 second ad on Wawatay Radio. This ad ran 3 times on each day of May 31, June 1, 14, 15, 28, 29, 2021 to advertise NRL.	—
June 2, 2021	Live Stream on the EA ToR process, supported by a PowerPoint presentation on the NRL Facebook and YouTube.	—
June 16, 2021	Live Stream on the EA ToR process, supported by a PowerPoint presentation on the NRL Facebook and YouTube.	—
June 30, 2021	Live Stream on the EA ToR process, supported by a PowerPoint presentation on the NRL Facebook and YouTube.	—
September 7 to 9, 2021	Notice of Open House #1 published in newspapers: Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout Bulletin, Thunder Bay Source, Geraldton Times Star, Anishinabek News, Northern Ontario Business.	—
October 14, 2021	Proponent posted a slideshow of photos from the NRL Open House on the NRL YouTube.	—
November 24, 2021	Notice of Draft Terms of Reference for Review published in newspapers: Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout Bulletin, Geraldton Times Star, Northern Ontario Business (online), Windspeaker (online), Anishinabek News (online), Wawatay News (online).	—
November 27, 2021	Social media team shared two posters via social media regarding the NRL Draft ToR Presentation for Off-Reserve members of MFN and WFN.	—
December 10, 2021	Ran a 30 second ad on Wawatay Radio three times in the day on December 10 & 13, 2021. The ad promoted the NRL Live Stream and Radio Show for December 13, 2021.	—
December 13, 2021	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on the Draft EA and ToR.	—
January 19, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on what comes next for the Project.	—
January 28, 2022	Ran a 30 second ad on Wawatay Radio three times on January 31 & February 1, 2022. The ad promoted the NRL Live Stream and Radio Show for February 2, 2022.	—
February 1, 2022	Emailed a press release to Accesswire on behalf of MFFN and WFN and announced the early engagement period for the Project has been completed.	—

Date	Description of Activity	Results/Feedback Received
February 2, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on the input received to date on the Draft EA and ToR from Indigenous communities and the mining industry.	—
February 9, 2022	Notice of Open House #2 published in newspapers: Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout Bulletin, Geraldton Times Star, Northern Ontario Business (online), Windspeaker (online), Anishinabek News (online), Wawatay News (online).	—
February 11, 2022	Ran a 30 second ad on Wawatay Radio three times on February 15 & 15, 2022. The ad promoted the NRL Live stream and Radio Show for February 16, 2022.	—
February 16, 2022	Ran ads on Wawatay Radio three times on February 21 & 22, 2022; CKPR-FM, CJSD-FM, CFNO-FM on February 16 – 23, 2022. The ads promoted the Virtual Open House for February 23 & 24, 2022.	—
February 16, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on providing a high-level, plain-language description of the federal impact assessment process.	—
February 18, 2022	Emailed a press release to Accesswire on behalf of MFFN and WFN on a Virtual Open House and two live events.	—
March 2, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on discussing the role and information components of the Initial Project Description.	—
March 11, 2022	Ran a 30 second ad on Wawatay Radio three times on March 14 & 15, 2022. The ad promoted the NRL Live stream and Radio Show for March 16, 2022.	—
March 16, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on discussing the role and information components of the Detailed Project Description.	—
March 30, 2022	Ran a 30 second ad on Wawatay Radio three times on March 28 & 29, 2022. The ad promoted the NRL Live stream and Radio Show for March 30, 2022.	—
March 30, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on discussing the components of the Proposed Environmental Assessment and Proposed ToR.	—
April 27, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on discussing the Geology, Terrain and Soils studies.	

Date	Description of Activity	Results/Feedback Received
April 27, 2022	Notice of Submission of Terms of Reference published in newspapers: Thunder Bay Chronicle, Timmins Daily Press, Sioux Lookout Bulletin, Geraldton Times Star, Northern Ontario Business (online), Windspeaker (online), Anishinabek News (online), Wawatay News (online).	—
May 11, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on discussing the Waterfowl and Breeding Birds studies.	
May 25, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on discussing the Fish and Fish Habitat studies.	
June 8, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on discussing the Groundwater and Surface Water studies.	
June 14-15, 2022	In-person open house and streamed event discussing project at PDAC Conference in Toronto.	
June 22, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the NRL Facebook and YouTube, with focus on discussing the Air, Noise and Vibration studies.	
October 11, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the WSR Facebook and YouTube, with focus on preliminary observations from the caribou baseline field studies.	
October 25, 2022	Hosted a 1 hour radio show on Wawatay Radio, as well as a 30 minute Live Stream on the WSR Facebook and YouTube, with focus on preliminary observations from the wolverine baseline field studies.	
Metalex Ventures Ltd.		
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Mining Watch Canada		
September 24, 2021	Received a mail return for the Notice of Open House from the stakeholder.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Municipality of Greenstone		
May 4, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—

Date	Description of Activity	Results/Feedback Received
November 29, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Municipality of Greenstone – Fire Services		
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Municipality of Pickle Lake		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
July 8, 2021	Received a completed contact form from stakeholder and a request for the Project map.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Nakina Air Service		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Nakina North Outfitters		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Ne-Daa Kii-Me Naan Inc.		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Nishnawbe Aski Police Service		
May 5, 2021	ToR Notice of Commencement letter sent.	__
May 12, 2021	Received a completed contact form from the stakeholder and comments about impacts on the communities, road infrastructure and policing the roads.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__

Date	Description of Activity	Results/Feedback Received
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Noront Muketei Minerals Ltd.		
May 5, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	—
August 31, 2021	Notice of Open House #1 sent.	—
November 22, 2021	Notice of Draft ToR sent.	—
February 11, 2022	Notice of Open House #2 sent.	—
Noront Resources Ltd. (Noront)		
May 5, 2021	ToR Notice of Commencement letter sent.	—
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	July 6, 2021, Noront sent an email in response to the Notice of Commencement follow up. They offered engineering and baseline data permit information for aggregate sources.
July 22, 2021	Noront sent an email requesting an address to send a USB that contains data and reports. SNC-Lavalin and the proponent responded and gave them a mailing address.	
August 31, 2021	Notice of Open House #1 sent.	—
November 9, 2021	The proponent emailed the stakeholder regarding the geotechnical drilling program to support the Environmental assessment (EA) for the Project, and noted there will be borehole drilling and groundwater monitoring wells installed. The letter included a Consent Form for a Permit under the *Public Lands Act,* and included maps of proposed locations and a drilling schedule.	On November 11, 2021, Noront submitted comments and suggested changes to the route.
November 22, 2021	Notice of Draft ToR sent.	On January 6, 2022, Noront submitted comments on the Draft ToR.
December 13, 2021	Received an email from Noront requesting a Teams meeting in January 2022 to discuss the areas of mineral importance and to avoid for road alignment.	Meeting was set up for January 2022.
January 13, 2022	Meeting on Noront Eagle's Nest mining leases and routing the NRL on it, intersection of WSR and NRL, and areas of mineral importance to avoid for road alignment.	Noront provided suggested changes to the route for consideration.
February 11, 2022	Notice of Open House #2 sent.	—
March 23, 2022	The proponent reminded the stakeholder regarding the geotechnical drilling program to support the Environmental assessment (EA) for the Project and noted there will be borehole drilling and groundwater monitoring wells installed. The letter included a Consent Form for a Permit under the *Public Lands Act* and included maps of proposed locations and a drilling schedule.	On March 25, 2022, Noront provided authorization to drill on the Noront mining lease.

Date	Description of Activity	Results/Feedback Received
North of Superior Trapping Association		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
NorthWestern Ontario Municipal Association		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
NorthWestern Ontario Snowmobile Trails Association		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
O'Sullivan Lake Outfitters		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
O'Sullivan Rainbow Lodge		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Ontario Federation of Anglers and Hunters (Zone B)		
May 4, 2021	ToR Notice of Commencement letter sent.	__
May 11, 2021	Received a completed contact form from the stakeholder and comments about water quality, federal lands (Indian Reserve), wildlife, species at risk, land use-work permits.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__

Date	Description of Activity	Results/Feedback Received
Ontario Progressive Party		
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Outland		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Pickle Lake Fire Department		
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Platinex Inc.		
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Public Open House		
September 14, 2021	Conducted an Open House of two x two-hour sessions at the Delta Hotel in Thunder Bay. The purpose of the Open House was to introduce Indigenous community members, stakeholders and the general public to the Project and make them aware of the upcoming release of the Draft EA ToR. The event included a newsletter, survey, panels for discussion and a presentation.	
September 15, 2021	Conducted an Open House of two x two-hour sessions at the Delta Hotel in Thunder Bay. The purpose of the Open House was to introduce Indigenous community members, stakeholders and the general public to the Project and make them aware of the upcoming release of the Draft EA ToR. The event included a newsletter, survey, panels for discussion and a presentation.	
February 23, 2022	Conducted a virtual Open House of two x two-hour sessions. The purpose of the Open House was to introduce Indigenous community members, stakeholders and the general public to the Project and make them aware of the upcoming release of the Draft EA ToR. The event included panels for discussion and a presentation.	
February 24, 2022	Conducted a virtual Open House of two x two-hour sessions. The purpose of the Open House was to introduce Indigenous community members, stakeholders and the general public to the Project and make them aware of the upcoming release of the Draft EA ToR. The event included panels for discussion and a presentation.	

Date	Description of Activity	Results/Feedback Received
Public, General		
April 28, 2021	Indigenous and Community Engagement (ICE) reached out to an elder and band member of MFFN to seek an elder to input on the proposed project information. They received a NRL Newsletter which highlighted Chiefs Messages, a map of the study area, the EA process, the Federal Impact Assessment Process, community engagement, consultation and participation, contact information and the Project Schedule.	__
July 7, 2021	The NRL Comment Box received a message from Dean Gatien requesting a discussion regarding the Project, planning and opportunities for partnering.	The proponent attempted to connect via phone call several times to set up a meeting but communications did not go through.
September 10, 2021	Sent email regarding the second edition of a Newsletter.	__
September 16, 2021	Email regarding NRL and Treaty Nine.	__
November 22, 2021	Received comment in NRL Comment Box.	__
November 27, 2021	Received comment in NRL Comment Box.	__
December 14, 2021	Received comment in NRL Comment Box.	__
February 20, 2022	Received comment in NRL Comment Box.	__
Sioux Lookout		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
July 21, 2021	Received a completed contact form from Mayor of Sioux Lookout and comments that they are interested in this project and how it will impact the economy of Sioux Lookout.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Superior Exploration Ltd		
May 10, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Superior North Catholic School Board		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__

Date	Description of Activity	Results/Feedback Received
Superior North EMS		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Superior-Greenstone District School Board		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Thunder Bay Catholic District School Board		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Thunder Bay Community Economic Development Commission		
May 5, 2021	ToR Notice of Commencement letter sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Thunder Bay Fire Rescue		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Thunder Bay Police Service		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Thunder Bay public Library Waverly Community Hub		
May 4, 2021	ToR Notice of Commencement letter sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
Timmins Public Library Main Branch		
November 20, 2021	Notice of Draft ToR sent.	__

Date	Description of Activity	Results/Feedback Received
Twin Lakes Outfitters		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Vision Mining Solutions Inc.		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Wabassi Resources Inc.		
May 5, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	On September 14, 2021, Wabassi Resources sent an email saying could not attend the Public Open House.
November 24, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Wilderness North		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Wilderness Outfitters/Leuenberger's Fly-In Lodge and Wilderness Outposts		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	__
February 11, 2022	Notice of Open House #2 sent.	__
Wildlands League		
January 20, 2022	Requested an extension to provide comments on the Draft ToR.	The proponent advised Wildlands League that they could provide Draft ToR review comments by January 31, 2022
January 31, 2022	Provided comments on the Draft ToR including.	__
February 11, 2022	Notice of Open House #2 sent.	__

Date	Description of Activity	Results/Feedback Received
Wildlife Conservation Society Canada		
May 4, 2021	ToR Notice of Commencement letter sent.	__
July 5, 2021	ToR Notice of Commencement follow-up letter sent.	__
August 31, 2021	Notice of Open House #1 sent.	__
November 22, 2021	Notice of Draft ToR sent.	On January 6, 2022, Wildlife Conservation Society Canada sent an email regarding the EA and protocols/consultation process of the Draft ToR. On January 6, 2022, Wildlife Conservation Society Canada sent an email regarding the EA, hazardous substances/materials, vegetation, wildlife and carbon in the NRL Draft ToR.
February 11, 2022	Notice of Open House #2 sent.	__

Appendix D

Summary of Key Issues Raised during the Terms of Reference Stage of the Provincial Environmental Assessment Process

D.1 Key Issues Raised by Provincial Agencies and Federal Authorities

Table D-1: Summary of Key Issues Raised by Provincial Agencies and Federal Authorities during Terms of Reference Stage of the Provincial Environmental Assessment Process

Key Issue Raised	Summary of Issue	Proponent Response
Federal Authorities		
Indigenous Services Canada		
Community Safety	Recommendation to include violence against women, elders, youth and gender-diverse individuals, other members of the community within crime rate factors.	The Environmental Assessment/Impact Assessment (EA/IA) will take into consideration that vulnerable communities (e.g., may include women, elders, youth and gender-diverse individuals) may be disproportionately affected by changes to crime rates.
Women and Gender Equality Canada		
Consultation/GBA+	The Project consultation and engagement plans should consider how to reach diverse population groups (e.g., women, Elders, youth, gender diverse people and those with disabilities). Consultation and engagement should allow for diverse people across and within equity-deserving populations to have opportunities to influence the design and implementation of the Project.	The proponent recognizes the importance of equality, diversity and inclusion. Although it has not yet been determined that a federal IA is required, the proponent expects the Project will be required to undergo a federal IA, as the Project is a designated project in accordance with the Physical Activities Regulations SOR/2019-285 under the *Impact Assessment Act* (IAA), and both the Marten Falls Community Access Road (MFCAR) and Webequie Supply Road (WSR) Projects received a determination that they are subject to a federal IA. If subject to a federal IA, the Project will be required to apply Gender Based Analysis Plus (GBA+) to the IA, which incorporates consideration of equality, diversity and inclusion to the EA/IA.

Key Issue Raised	Summary of Issue	Proponent Response
Provincial Agencies		
Ministry of Northern Development, Mines and Natural Resources (now Ministry of Northern Development, Ministry of Mines [MINES], and Ministry of Natural Resources and Forestry [MNRF])		
Assessment of Alternative Means/Methods	Request for more detailed description of how alternatives will be evaluated and when the criteria will be developed.	In conducting the assessment of alternative methods of carrying out the Project the proponent will identify the advantages and disadvantages of each alternative method across a spectrum of established evaluation criteria. Preliminary criteria are provided in Table 2-6 (Preliminary Criteria and Factors for the Evaluation of "Alternative Methods") of the Proposed Terms of Reference (ToR). The evaluation of alternative methods of carrying out the Project will incorporate input from Indigenous communities, the public, stakeholders, and federal and provincial regulators, to be obtained through consultation and engagement process, as well as Indigenous Knowledge/Indigenous Land and Resource Use (IK/ILRU) and other baseline data. The proponent is currently reviewing feedback received during the review period for the Proposed ToR to update the criteria and factors. Further consultation and engagement activities will be conducted to refine and finalize the criteria and factors, the timing of which is still being determined.
Indigenous Knowledge	Concerns about confidentiality in the use of IK in the EA/IA.	IK and information on ILRU shared and/or collected through the program for the EA/IA will be governed by IK Sharing Agreements.
Ministry of the Environment, Conservation and Parks		
Assessment Methods	Request to include Species at Risk (SAR) as a separate VC.	SAR has been included as a separate VC for the assessment of Project effects.
	Request to ensure Indigenous communities can provide input to all aspects of the EA/IA including baseline studies.	Indigenous communities will have opportunities to provide input to the EA/IA. The proponent will collect and include input provided by Indigenous communities during multiple stages of the EA/IA through the Indigenous Knowledge and Consultation and Engagement Programs. This includes input into baseline data.
Assessment of Alternative Means/Methods	Recommendation to consider future permitting requirements (including the *Endangered Species Act*, 2007) in the assessment of alternative methods/means (i.e., alternative corridors and alternative supportive infrastructure).	The Project will be planned, and the EA/IA prepared, in accordance with the requirements of the *Endangered Species Act*, 2007.
	Request that the proponent includes a commitment that all alternative methods and project components will be identified and assessed in the EA; or clarified in the ToR how the EA will address potential gaps in assessing and selecting alternative methods for any project components.	The ToR has been revised to provide clarity on the assessment of alternative methods of carrying out the Project. A new Section 2.2.2 (Supportive Infrastructure Alternatives) has been added in the Proposed ToR to clarify the supportive infrastructure alternatives (temporary and/or permanent infrastructure) that will be assessed in the EA/IA.

Key Issue Raised	Summary of Issue	Proponent Response
Climate Change	Concerns about specific mitigation measures to reduce potential GHG emissions caused by the disruption of carbon sinks.	As described in Section 6.5 (Mitigation Measures) of the ToR, mitigation measures will be developed to address the potential Project related effects identified for each VC. A commitment has been added to the Table of Commitments to specifically identify that the EA/IA will identify and commit to undertaking specific mitigation measures to reduce potential GHG emissions caused by the disruption of carbon sinks.
Commitments	Request to develop ToR commitments with consideration of the review comments made on the Draft ToR.	The list of ToR commitments has been developed with consideration of the review comments received on both the Draft ToR and the Proposed ToR.
Consultation and Engagement	Concerns related to ensuring meaningful consultation with Indigenous communities through all stages of the EA/IA.	Steps will be taken to ensure consultation is meaningful when engaging with Indigenous communities.
Cumulative Effects	Recommendation to consider the anticipated cumulative effects assessments in the WSR and MFCAR EAs.	The cumulative effects assessment will consider proposed projects for which the environmental effects overlap with the Project. This includes effects identified for reasonably foreseeable projects such as MFCAR and WSR.
Parks and Protected Areas	Request that obligations under the Class Environmental Assessment for Provincial Parks and Conservation Reserves (CEAPPCR) be consolidated and fulfilled through the comprehensive EA process to greatest extent possible.	If a CEAPPCR is identified as required for the Project, the EA/IA will meet the requirements of the CEAPPCR in conjunction to the requirements of the Comprehensive EA for the Project (i.e., the EA/IA).
Species at Risk	Consider mitigation measures that avoid or minimize adverse effects to Species at Risk (SAR) and develop reasonable alternatives to the Project through the EA/IA which may meet application requirements for an *Endangered Species Act*, 2007 (ESA) authorization, should one be required.	Construction and operation of the Project may have effects on species or species habitat protected by the ESA. If such effects are unavoidable, authorizations or permits under these acts may be required to proceed with the Project. In order to ensure adequate data collection occurs and that application requirements for these permits are met, data collection and study planning will follow guidelines published by both provincial agencies and federal authorities. Species specific surveys, where required, will be conducted according to appropriate protocols. These guidelines will be followed in all stages of the EA/IA, including project planning, field data collection, assessment of alternatives, assessment of Project effects, and during the development of mitigation measures.
	Recommendation that the Project be planned, and the environmental assessment prepared, with the requirements of the ESA in mind to reduce potential delays should ESA authorization be required.	The Project will be planned, and the environmental assessment prepared, with the requirements of the ESA in mind to avoid delays. This can potentially facilitate the authorization process under the ESA, where authorization is required. In order to inform any future ESA authorization requirements, reasonable route/project alternatives should be assessed for impacts to all SAR and their respective habitats, and at least one avoidance alternative will be included.
	Avoid or minimize effects to SAR and their habitat.	The assessment of alternatives and project effects assessment will include all SAR that may occur within the vicinity of the project area.

Key Issue Raised	Summary of Issue	Proponent Response
Attawapiskat River	Ontario Parks would like to note that access control from the right-of-way (ROW) to the Attawapiskat River at its crossing is of particular interest. Ontario Parks is not presently looking to establish new access points to the river and these developments would be subject to further park planning processes and environmental assessment.	The proponent understands that Ontario Parks is not presently looking to establish new access points to then Attawapiskat River and will discuss this further with Ontario Parks during the EA/IA.
Ministry of Heritage, Sport, Tourism and Culture (now Ministry of Tourism, Culture and Sport [MTCS], and Ministry of Citizenship and Multiculturalism [MCM])		
Cultural Heritage Resources	Suggestion to include two valued components (VC) under cultural heritage resources: › Archaeological Resources; and › Built Heritage Resources and Cultural Heritage Landscapes.	The proponent will include the following preliminary VCs for Cultural Heritage Resources: › Archaeological Resources; and › Built Heritage Resources and Cultural Heritage Landscapes.
Ministry of Natural Resources and Forestry		
Assessment Methods	Assessment of effects on peatlands.	Peatlands will be an important consideration for both the assessment of alternatives and the assessment of Project effects. The length of each alternative corridor segment through peatland will be identified in the EA/IA. Peatlands will be considered as part of several VC assessments, including Groundwater, Surface Water, Geology, Terrain and Soils, GHG emissions, and Plants and Vegetation Communities. Where peatlands cannot be avoided, the proponent will consider construction methods to minimize effects to peatlands. The proponent will consult with NDMNRF (now MNRF) who possess expertise in this subject and who are involved in peatland-hydrological studies in the development of the study plans that include peatlands.
Class Environmental Assessments	Clarification requested about MNRF Class EAs required for the Project.	The EAR/IS will provide detailed information on Class EAs required for the Project, including MNRF Class EAs and what they will cover, and how the Class EAs will be met in conjunction with the Individual EA.
Species at Risk	Recommendation to add Eastern Migratory Caribou, Eastern Wood-pewee and Lake Sturgeon to the list of components on which the EA/IA will assess the effect of the Project on Species at Risk.	Eastern Migratory Caribou, Eastern Wood-pewee and Lake Sturgeon will be added to the list of SAR to be assessed in the EAR/IS.

D.2 Key Issues Raised by Stakeholders and the Public

Table D-2: Summary of Key Issues Raised by Stakeholders and the Public during the Terms of Reference Stage of the Provincial Environmental Assessment Process

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
Wildlands League Friends of the Attawapiskat River	Alternatives to the Project	The rationale employed for discounting a wider array of alternatives, and imposing this "focused approach," is poorly supported. The "Alternatives to the Project" have been prematurely narrowed, in that the alternatives assessment will only consider the "do nothing" alternative.	The ToR Code of Practice (MOE, 2014) allows for proponents to limit the discussion of previously examined alternatives in the Environmental Assessment/Impact Assessment (EA/IA) when alternatives have been previously considered through a separate decision-making process, such as a provincial government priority initiative. The need to build all-season road access to northern communities, was identified in the following provincial planning processes prior to commencement of the Project: › 25-year Growth Plan for Northern Ontario, 2011 (MOI and MNDMF, 2011). › Building Better Lives: Ontario's Long-term Infrastructure Plan 2017 (MOI, 2017), which includes a commitment by the Province to work with remote communities and other levels of government towards improved access for residents of these communities. The Plan (MOI, 2017) also considers the all-season road to the Ring of Fire a critical step towards realizing the economic benefits of the McFaulds Lake region mineral deposits for people of the region. › Connecting the North: A Draft Transportation Plan for Northern Ontario (MTO, 2021), where the province recognizes that there is a growing demand for the expansion of all season roads in the Far North. In addition, Marten Falls First Nation (MFFN) and Webequie First Nation (WFN) have entered into a Voluntary Agreement with the Minister of the Environment, Conservation and Parks under which the two First Nations have agreed to undertake an EA for the Project, as an all-season road (MECP, MFFN and WFN, 2020). Therefore, since the Project was identified to be an all-season road before the study for this Project commenced under the Ontario *Environmental Assessment Act* (EA Act), the EA/IA process will not re-examine past planning processes and decisions and therefore will not assess "alternatives to" the Project other than the "do nothing" alternative, which will be included for comparison against the proposed undertaking (i.e., the Project). Furthermore, as indicated in Section 2.1 (Description of and Rationale for "Alternatives to" the Project Considered) of the Proposed ToR, the Project would be linking two roads, the proposed MFCAR and the proposed WSR. As such, the NRL is also proposed to be a road (i.e., connecting the proposed roads with the same modal option). As indicated in Section 2.1.2 (Other "Alternatives to" the Project) of the Proposed ToR, for transportation projects, "alternatives to" the undertaking typically includes options such as new or improved roads, new or improved rail service or air service. However, these alternatives to the Project would be less

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
			viable than a road due to the need for inter-modal transfers. Furthermore, these alternatives to the Project would not meet the purposes of the Project, which is the design, construction, and operation/maintenance of a proposed all-season road between the proposed MFCAR and the proposed WSR. As such, the EA/IA will consider "do nothing" as the only "alternative to" the Project. With regards to "alternative methods", the criteria and factors for evaluating “alternative methods” set out in Table 2-6 of the Proposed ToR are preliminary and will be refined, augmented and validated with feedback from consultation and engagement with Indigenous communities, federal and provincial agencies, the public and stakeholders, for use in the alternatives evaluation to be included in the EA/IA. References: Ministry of the Environment (MOE). 2014. Code of Practice: Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario. Available: https://www.ontario.ca/page/preparing-and-reviewing-terms-reference-environmental-assessments-ontario Minister of the Environment, Conservation and Parks, Marten Falls First Nation and Webequie First Nation (MECP, MFFN and WFN). 2020. Voluntary Agreement. Signed on October 28, 2020. Available: https://www.ontario.ca/page/northern-road-link-project#section-4 Ministry of Infrastructure (MOI). 2017. Building Better Lives: Ontario’s Long-Term Infrastructure Plan 2017. Available: https://www.ontario.ca/document/building-better-lives-ontarios-long-term-infrastructure-plan-2017 Ministry of Infrastructure and Ministry of Northern Development, Mines and Forestry (MOI and MNDMF). 2011. The Growth Plan for Northern Ontario. Available: https://www.ontario.ca/document/growth-plan-northern-ontario. Ontario Ministry of Transportation (MTO). 2021. Connecting the North: A Draft Transportation Plan for Northern Ontario. March 2021. Available: https://www.ontario.ca/page/connecting-north-draft-transportation-plan-northern-ontario
Wildlands League	Assessment Themes	Hydrological impacts of the proposed road, due to barrier effects is insufficiently addressed. Impacts to the hydrology of this area could produce effects that are wide-spread, substantially delayed, and prone to additional climate change	The proponent recognizes the value of and potential impacts to peatlands. Peatlands will be considered in the hydrology, groundwater, vegetation, and climate change assessments. The proponent will evaluate design and mitigation measures to reduce impacts to peatlands, including road building techniques to prevent barrier effects from road construction through peatlands.

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
		feedback effects - all contributing significant uncertainty to this project that should be custom-assessed with specific EA design tailored to these mechanisms.	
Mineral Rights Holder	Climate Change Resilience	The EAR/IS should include consideration of the resilience of the Project design and operations to the effects of climate change.	Climate Resilience Assessment reporting will include sections on climate change resilience for project design and project operations.
Mineral Rights Holder	Consultation and Engagement	Include a “Known Mineral Resource” criterion and a “Mineral Potential” criterion for alternatives selection. The road should not go over currently known development areas or high priority exploration areas that may lead to future mine development.	Table 2-6 (Preliminary Criteria and Factors for the Evaluation of “Alternative Methods”) has been updated to include known mineral resource/areas of high mineral potential.
Wildlands League	Cumulative Effects	The Project will trigger industrial development in the Ring of Fire, bringing regional-scale pressures to the broader Ring of Fire area, including potential impacts spanning multiple watersheds geographically, on an irreversible timeline. The Project ToR must clearly anticipate and fully contemplate those regional pressures here in its assessment plans.	The EA is being conducted for the NRL Project. Other developments in the Ring of Fire may undergo separate EA processes. The EA/IA for the NRL Project will include an assessment of cumulative effects that will consider reasonably foreseeable undertakings with temporal and/or spatial overlap with the NRL Project. The NRL Project Team acknowledges that the ToR provides limited information on proposed mining activities in the Ring of Fire area. As described in Section 6.7 (Cumulative Effects Assessment) of the Proposed ToR, "The EA/IA will include a cumulative effects assessment to identify and characterize Project effects that are likely to interact cumulatively with the effects of other past, present or reasonably foreseeable projects and/or activities. The Ring of Fire is an area that has been targeted for development by Ontario due to mining potential (NDMNRF, 2021a). Reasonably foreseeable projects to be included in the cumulative effects assessment will consider but not be limited to mine development and exploration, proposed road construction (e.g., MFCAR and WSR), and other utilities and associated infrastructure to support mine development. The cumulative effects assessment will also consider, where appropriate, any publicly available information that may be generated

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
			through the federal Regional Assessment that is considered to be relevant to the NRL Project." Additional details on the cumulative effects assessment will be presented in the Cumulative Effects Assessment Study Plan. References: Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF). 2021a. Ring of Fire. Accessed: June 11, 2021. Available: https://www.mndm.gov.on.ca/en/ring-fire
WWF-Canada	Cumulative Effects	Understanding the ecosystem consequences of the cumulative stressors on the peatland and boreal forest within the Hudson and James Bay lowlands resulting from the NRL as well as from the industrial mining activity that may be facilitated by its construction, will be exceedingly challenging.	The proponent acknowledges the importance of peatlands, the boreal forest, carbon sinks, wetlands and the general hydrology of the region. These matters will be discussed during the EA/IA within the effects assessment for various valued components including surface water, groundwater and vegetation, as well as within the climate change assessment, as applicable.
WWF-Canada	Cumulative Effects	The NRL, WSR and MFCAR projects should be included in the Regional Assessment to better assess cumulative effects.	In November 2020, the Minister of Environment and Climate Change (the Minister) determined that a Regional Assessment will be conducted in an area centered on the Ring of Fire mineral deposits in Northern Ontario. The Minister directed the Impact Assessment Agency of Canada (the Agency) to engage with Indigenous groups, non-government organizations, the Province of Ontario and other federal departments to discuss appropriate activities, outcomes and spatial and temporal boundaries for the Regional Assessment. As indicated by the Agency, the ongoing impact/environmental assessments for proposed road developments in Northern Ontario will continue according to their legislated processes and timelines (the Agency, 2022). The Regional Assessment scope will not include or duplicate these ongoing assessments, including their project-specific assessments of effects, analyses of the purpose and need for these projects, or other factors and components (the Agency, 2022). It is anticipated that the Regional Assessment will focus on future mine development activities and their potential effects (both positive and adverse), as these types of activities are considered the most likely future physical activities to be proposed and carried out in this region in the foreseeable future. Relevant information generated through the Regional Assessment for the Ring of Fire Area will be used to inform the Project effects assessment, as the developed information becomes available. This may include informing the baseline studies, effects prediction, cumulative effects assessment, the consideration of possible mitigation and

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
			enhancement measures, and follow-up programs, as applicable. It is noted however that the completion of the Regional Assessment is not a requirement for the proponent to proceed with the EA/IA process for the Project. As described in Section 6.7 (Cumulative Effects Assessment) of the Proposed ToR, the EA/IA for the Project will include a cumulative effects assessment. The cumulative assessment will follow existing federal guidance, in the absence of clear provincial guidance. The scoping of the cumulative effects assessment will include other past, present or reasonably foreseeable projects and activities. The definition of 'Reasonably Foreseeable' in existing guidance is as follows: The action may proceed, but there is some uncertainty about this conclusion (the Canadian Environmental Assessment Agency's Operational Policy Statement Addressing Cumulative Environmental Effects under the *Canadian Environmental Assessment Act* recommends that at least these types of projects be considered). It also goes on to state that these other activities and projects could be directly associated with the project under review but are conditional on that project's approval. The proponent acknowledges that the scope and breadth of what activities and projects to be included in the cumulative effects assessment will be limited by available information and focus on regional concerns. A cumulative effects assessment depending on projects not yet foreseeable has the tendency to lose predictive certainty and degrade the value of the assessment to stakeholders and decision makers. At this time, the cumulative effects assessment scoping in the ToR covers the potential future conditions of known or reasonably foreseeable activities or projects, including reasonably foreseeable mineral exploration and mining development projects. References: Impact Assessment Agency of Canada (the Agency). 2022. Regional Assessment in the Ring of Fire Area - Overview of Draft Agreement and Terms of Reference. Information Sessions: December 9, 17, 2021; January 17, 18, 19, 2022. Available: https://iaac-aeic.gc.ca/050/documents/p80468/142509E.pdf
WWF-Canada	Cumulative Effects	As the NRL is explicitly predicated upon the possibility of mining activity, the EA must explicitly consider the impacts associated with potential future mining projects in order to be meaningful.	It is reiterated that the NRL is a transportation project, not a mining project. The Project objectives related to the generation of community and regional benefits are not secondary to the provision of industrial access to the Ring of Fire, and are paramount in the minds of the proponent. Improved land access to remote communities (in this case, to Webequie First Nation) is widely recognized as a mechanism for achieving social and health benefits (in addition to economic benefits), elevating levels of community well-being, and is an integral component of provincial growth and development policies for the region. MFFN and WFN are collectively the "proponent" of the EA and preliminary design for the Project. The proponent has entered into a Voluntary Agreement with the Minister of the Environment, Conservation and

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
			Parks (MECP, MFFN and WFN, 2020) under which the two First Nations have agreed to undertake an EA for the Project under the Ontario EA Act. As described in Section 6.7 (Cumulative Effects Assessment) of the Proposed ToR, the EA/IA for the Project will include a cumulative effects assessment. The cumulative assessment will follow existing federal guidance, in the absence of clear provincial guidance. The scoping of the cumulative effects assessment will include other past, present or reasonably foreseeable projects and activities. The definition of 'Reasonably Foreseeable' in existing guidance is as follows: The action may proceed, but there is some uncertainty about this conclusion (the Canadian Environmental Assessment Agency's Operational Policy Statement Addressing Cumulative Environmental Effects under the *Canadian Environmental Assessment Act* recommends that at least these types of projects be considered). It also goes on to state that these other activities and projects could be directly associated with the project under review but are conditional on that project's approval. The proponent acknowledges that the scope and breadth of what activities and projects to be included in the cumulative effects assessment will be limited by available information and focus on regional concerns. A cumulative effects assessment depending on projects not yet foreseeable has the tendency to lose predictive certainty and degrade the value of the assessment to stakeholders and decision makers. At this time, the cumulative effects assessment scoping in the ToR covers the potential future conditions of known or reasonably foreseeable activities or projects, including reasonably foreseeable mineral exploration and mining development projects. References: Minister of the Environment, Conservation and Parks, Marten Falls First Nation and Webequie First Nation (MECP, MFFN and WFN). 2020. Voluntary Agreement. Signed on October 28, 2020. Available: https://www.ontario.ca/page/northern-road-link-project#section-4
Wildlands League WWF-Canada	Cumulative Effects / Regional Assessment in the Ring of Fire Area	The NRL EA/IA should not proceed until the Regional Assessment in the Ring of Fire has been completed. The NRL EA should be paused until the Regional Assessment is completed and it include an analysis of the impacts of potential mining development on the region.	Completion of the Regional Assessment is not a requirement for the proponent to proceed with the EA process for the Project. The Project is following the EA process in order to support the development of a vital transportation corridor for two First Nation communities (MFFN and WFN). The proponent has entered into a Voluntary Agreement with the Minister of the Environment, Conservation and Parks (MECP, MFFN and WFN, 2020) under which the two First Nations have agreed to undertake an Individual EA for the Project under the Ontario EA Act, which is the most comprehensive form of EA in Ontario. The decision to proceed with the provincial EA process for the Project is consistent with the agreement between the proponent and the Province of Ontario to proceed with the Project in accordance with provincial EA legislation, which entails completing the process in a timely manner. The proponent has also committed to realizing the Project's intended/perceived benefits for their respective communities, and the region as a whole, within a reasonable timeframe. Deferring/pausing the Project's EA does not align with these objectives.

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
			The proponent is taking the necessary steps to ensure meaningful consultation and engagement for the Project. Some of the timelines for the ToR process are legislated in accordance with the Ontario EA Act and others are proponent-led. The Draft ToR was circulated to Indigenous communities, the public and provincial and federal agencies for feedback for a 30-day period on November 16, 2021. The review period was extended to the end of January 2022 for Indigenous communities. Feedback received was incorporated to the document, and the Proposed ToR was submitted to MECP and made available for Indigenous and public review on April 29, 2022. While the ToR comment period is normally 30 days, the MECP extended the comment period to 60 days to allow for more time to review and comment on the Proposed ToR. Additional time was provided to Indigenous communities to December 14, 2022, at the request of some Indigenous communities for more time to carry out a thorough review of the Proposed ToR. The EA for the Project will include a cumulative effects assessment, as described in Section 6.7 (Cumulative Effects Assessment) of the Proposed ToR. The cumulative effects assessment will consider past, present and reasonably foreseeable projects and/or activities. Relevant information generated through the Regional Assessment for the Ring of Fire Area will be used to inform the Project effects assessment, as the developed information becomes available. This may include informing the baseline studies, effects prediction, cumulative effects assessment, the consideration of possible mitigation and enhancement measures, and follow-up programs, as applicable. References: Minister of the Environment, Conservation and Parks, Marten Falls First Nation and Webequie First Nation (MECP, MFFN and WFN). 2020. Voluntary Agreement. Signed on October 28, 2020. Available: https://www.ontario.ca/page/northern-road-link-project#section-4
Friends of the Attawapiskat River	Cumulative Effects / Regional Assessment in the Ring of Fire Area	Request for a moratorium on development activities in the Ring of Fire until meaningful Indigenous engagement had been undertaken, the Regional Assessment process is complete, and protection plans for sensitive wetlands and watersheds are in place.	It is acknowledged that there has been no previous cumulative effects assessment for the Ring of Fire. This is however, outside of the scope of the EA/IA for the Project. In November 2020, the federal Minister of Environment and Climate Change (the Minister) determined that a Regional Assessment will be conducted in an area centered on the Ring of Fire mineral deposits in northern Ontario. The Minister directed the Agency to engage with Indigenous groups, non-government organizations, the Province of Ontario and other federal departments to discuss appropriate activities, outcomes and spatial and temporal boundaries for the Regional Assessment. It is anticipated that the Regional Assessment will focus on future mine development activities and their potential effects (both positive and adverse), as these types of activities are considered the most likely future physical activities to be proposed and carried out in this region in the foreseeable future.

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
			Relevant information generated through the Regional Assessment for the Ring of Fire Area will be used to inform the Project effects assessment, as the information becomes available. This may include informing the baseline studies, effects prediction, cumulative effects assessment, the consideration of possible mitigation and enhancement measures, and follow-up programs, as applicable. It is noted however that the completion of the Regional Assessment is not a requirement for the proponent to proceed with the EA/IA process for the Project. It is reiterated that the NRL is a transportation project, not a mining project. The Project objectives related to the generation of community and regional benefits are not secondary to the provision of industrial access to the Ring of Fire, and are paramount in the minds of the proponent. Improved land access to remote communities (in this case, to WFN) is widely recognized as a mechanism for achieving social and health benefits (in addition to economic benefits), elevating levels of community well-being, and is an integral component of provincial growth and development policies for the region. The proponent of the Project (MFFN and WFN collectively referred to as "the proponent") has entered into a Voluntary Agreement with the Minister of the Environment, Conservation and Parks (MECP, MFFN and WFN, 2020) under which the two First Nations have agreed to undertake an EA for the Project under the Ontario EA Act. As described in Section 6.7 (Cumulative Effects Assessment) of the Proposed ToR, the Project's EA/IA will include a cumulative effects assessment. The cumulative assessment will follow existing federal guidance, in the absence of clear provincial guidance. The scoping of the cumulative effects assessment will include other past, present or reasonably foreseeable projects and activities. In addition, the proponent is conducting and providing opportunities for meaningful Indigenous consultation and engagement for the Project. The proponent communities (MFFN and WFN) believe that the Regional Assessment in the Ring of Fire should be focused on future mining activity, as it was intended. Pausing the Project's EA/IA until meaningful Indigenous engagement had been undertaken on development activities in the Ring of Fire, the Regional Assessment process is complete, and protection plans for sensitive wetlands and watersheds are in place, is inconsistent with the agreement between the proponent and the Province of Ontario to proceed with the Project in accordance with provincial EA legislation, which entails completing the process in a timely manner. The proponent has also committed to realizing the Project's intended/perceived benefits for their respective communities, and the region as a whole, within a reasonable timeframe. Deferring/pausing the Project's EA does not align with these objectives. The proponent is taking the necessary steps to ensure meaningful consultation and engagement for the NRL Project. Some of the timelines for the ToR process are legislated in accordance with the Ontario EA Act and others are proponent-led. The Draft ToR was circulated to Indigenous communities, the

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
			public and provincial and federal agencies for feedback for a 30-day period on November 16, 2021. The review period was extended to the end of January 2022. Feedback received was incorporated into the document. The Proposed ToR was submitted to MECP and made available for Indigenous and public review on April 29, 2022. While the ToR comment period is normally 30 days, the MECP extended the comment period to 60 days to allow for more time to review and comment on the Proposed ToR. Additional time was provided to Indigenous communities to December 14, 2022, at the request of some Indigenous communities for more time to carry out a thorough review of the Proposed ToR. With respect to the request for a moratorium on development activities in the Ring of Fire until, this is outside the scope of what MFFN and WFN are responsible for responding to as the proponent for the Northern Road Link Project. References: Minister of the Environment, Conservation and Parks, Marten Falls First Nation and Webequie First Nation (MECP, MFFN and WFN). 2020. Voluntary Agreement. Signed on October 28, 2020. Available: https://www.ontario.ca/page/northern-road-link-project#section-4
Friends of the Attawapiskat River Wildlands League WWF-Canada	Project Splitting	Three clearly associated TORs are being concurrently advanced - Multiple, overlapping and integrated projects are concurrently being contemplated - each examining incremental parts of a region-changing project (i.e., MFCAR, WSR and NRL projects). The three road projects (NRL, MCAR and WSR) ought to be scoped together for the purposes of a meaningful environmental assessment. The decision to conduct separate EAs for the Project, the proposed MFCAR, the proposed WSR, and the Ring of Fire mine	The Ontario EA process is proponent-led. The proponents for each of the three proposed all-season road projects (MFCAR [MFFN], WSR [WFN], and NRL [MFFN and WFN, collectively the “proponent”]) separately requested to enter into agreements with the Minister of the Environment, Conservation and Parks under the Ontario EA Act to make their respective projects subject to the requirements of the Ontario EA Act, because the purpose of each of the three projects is different. As a result of those agreements, each of the three proposed road projects are undergoing Individual EAs, which is the most comprehensive form of EA in Ontario. Separating large projects into smaller ones (i.e., project splitting) has been attempted in the past by some proponents to: i) avoid regulatory thresholds like the federal Impact Assessment or, ii) have the ability to understate project impacts. The proponent is not doing either. The proponents chose to undertake separate projects because their purpose is different. The three proposed all-season road projects are distinct and unique, with different purposes designed to meet the specific objectives of their respective proponents. The Proposed ToR is specific to the NRL Project and as such it is scoped for this individual project. The WSR and MFCAR projects have their own Terms of Reference.

Stakeholder	Key Issue Raised	Summary of Issue	Proponent Response
		development (the “related projects”) amounts to project-splitting. As a result of project-splitting, the full scale and impact of the project cannot be fully presented, either to the federal government or the public and Indigenous nations.	
Wildlands League	Proponent	At least two proponents - or key proponent relationships - are not being adequately represented here: the apparent default financier and owner, the Province; and the primary targeted beneficiary, the mining sector, as represented by at least the contemplated projects to date.	The Province of Ontario and the mining sector are not proponents of the Project. The Ontario EA Act defines "proponent" as a person (or entity) that: carries out or proposes to carry out a project, or is the owner or person having charge, management or control of a project. The proponent of the Project’s EA/IA and preliminary design are Marten Falls First Nation (MFFN) and Webequie First Nation (WFN), referred to collectively as ‘the proponent’. The proponent has entered into an agreement with the Minister of the Environment, Conservation and Parks under the Ontario EA Act to make the Project subject to the requirements of the EA Act. Proponent options for road ownership, operation/maintenance activities and liability are being considered in ongoing discussions with the Province of Ontario. It is recognized that should there be a change in Project proponency, all Project conditions, commitments and responsibilities agreed upon during the EA/IA planning phase the EA/IA, including proposed mitigation, would be transferred to or shared by the new proponent.
Wildlands League	Purpose	The purpose of this project is multiple, but primarily economic, with mineral extraction obviously being positioned as the primary economic driver.	The Project objectives related to the generation of community and regional benefits are not secondary to the provision of industrial access to the Ring of Fire, and are paramount in the minds of the Project proponents. Improved land access to remote communities (in this case, to WFN) is widely recognized as a mechanism for achieving social and health benefits (in addition to economic benefits), elevating levels of community well-being, and is an integral component of provincial growth and development policies for the region.
Wildlands League	Traffic	Not enough information is provided about anticipated traffic (e.g., target road use, loading and design standards, characterization of associated transportation needs and pressures over the indefinite temporal horizon expected).	The Project is currently undergoing preliminary engineering design, and a more detailed characterization of the nature and volume of anticipated road traffic will be provided in the EAR/IS. The amount and nature of traffic will be an important consideration for both design of the road and the assessment of effects, including effects from air, GHG and noise emissions. Various information sources are being reviewed to develop the assumptions around traffic, as well as consultation with Ring of Fire mining claims holders.

D.3 Key Issues Raised by Indigenous Communities and Groups

Table D-3: Summary of Key Issues Raised by Indigenous Communities and Groups during the Terms of Reference Stage of the Provincial Environmental Assessment Process

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
Kashechewan First Nation Marten Falls First Nation Weenusk First Nation Fort Albany First Nation Nibinamik First Nation	Aboriginal or Treaty Rights and Interests	Acknowledgement and protection of Aboriginal or Treaty Rights.	As part of engagement and consultation with Indigenous communities during the Environmental Assessment/Impact Assessment (EA/IA), the proponent will identify concerns communities may have about potential adverse impacts on Aboriginal or Treaty Rights and Interests, including inviting communities to share Indigenous Knowledge (IK) or information about traditional land uses that may be impacted by the Project. A Memorandum of Understanding (MOU) between MECP, NDMNRF (now Ministry of Northern Development, MINES, and MNRF), Marten Falls First Nation (MFFN) and Webequie First Nation (WFN) has been signed and sets out the roles and responsibilities between the proponent and Ontario, as the Crown, for conducting Statutory and Crown Consultation. Through the Consultation and Engagement Plan and the IK Program, the proponent aims to collaborate with Indigenous communities in characterizing baseline conditions, predicting potential project impacts, and determining appropriate mitigation and monitoring methods for all valued components, including Aboriginal and Treaty Rights and Interests.
Weenusk First Nation	Aboriginal or Treaty Rights and Interests	Weenusk First Nation will undertake an assessment of potential impacts to their rights. Concerns about whether the proponent the proponent(s) will: (1) accept and, where applicable, implement the approach as defined by Weenusk First Nation, and (2) work collaboratively with Weenusk First Nation to identify the level of impact to Weenusk First Nation's rights.	The proponent plans to collaborate with Weenusk First Nation through the Consultation and Engagement Plan and the IK Program regarding Weenusk's Aboriginal and Treaty Rights and Interests. As described in Section 7.1.1.2.3 (Proposed Baseline Studies) of the Proposed Terms of Reference (ToR), "it is expected that communities undertaking a Project-specific study will employ a methodology that will suit their needs and community protocols".

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
Marten Falls First Nation	Alternative Means/Methods	Selected routes should avoid adverse impacts on the use of land and resources for traditional purposes, Aboriginal and Treaty Rights, and cultural sites and features.	During the development of the EA/IA, Indigenous communities will have opportunities to provide feedback on "alternative methods" for carrying out the Project, including the alternative corridor segments. Twelve alternative corridor segments are identified in the ToR; however, additional alternative corridors may be identified during the development of the EA/IA, based on input from Indigenous communities and interested persons, discussion with regulators, available IK/ILRU, and information collected during the baseline characterization. The assessment of alternative corridors will consider ways to avoid or minimize impacts to the various criteria.
Kashechewan First Nation Mushkegowuk Tribal Council Weenusk First Nation	Climate Change Assessment	Concerns related to greenhouse gases (GHG) exacerbating the climate crisis and inclusion of IK in the climate change assessment.	As described in Section 8 (Climate Change Assessment) of the Proposed ToR, a climate change assessment will be conducted for the Project. As described in Section 8.1 (Impacts of the Project on Climate Change) of the Proposed ToR, the assessment of effects of the Project on climate change will quantify and qualify the Project's contribution to climate change due to GHG emissions and changes to the landscape that may affect the removal or storage of carbon dioxide (e.g., carbon sinks). Further details on the assessment of climate change will be presented in the Climate Change Assessment Study Plan. Through the Consultation Plan and the IK Program, the proponent aims to collaborate with Indigenous communities in characterizing baseline conditions, predicting potential project impacts, and determining appropriate mitigation and monitoring methods. This includes the collection of IK that may be used in the Climate Change Assessment.
Attawapiskat First Nation	Climate Change Assessment	Considering the climate impacts of development in the Ring of Fire one road segment at a time is inadequate and misses the long-term climate effects of opening an entire region, containing vast expanses of carbon-storing peatland, to development.	The EA/IA will include a climate change assessment for the Project which will include consideration of cumulative effects. A climate change assessment for the entire Ring of Fire is outside of the scope of the EA for the Project.

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
Aroland First Nation Eabametoong First Nation Fort Albany First Nation Mushkegowuk Tribal Council Neskantaga First Nation Nibinamink First Nation	Consultation and Engagement	Concerns that Indigenous communities are not being consulted in a meaningful manner.	The proponent is taking the necessary steps to ensure meaningful consultation and engagement for the Project. The proponent has requested that Indigenous communities share their consultation protocols/consultation frameworks and has offered to meet with communities to understand the principles of consultation they would like to see as a framework to meaningful consultation and engagement. In addition, the province of Ontario has made participant funding available to Indigenous communities whose Aboriginal or treaty rights may be adversely affected by the proposed road project. Funding would support consultation activities related to the ToR and engagement in the EA process associated with this Project.
Eabametoong First Nation	Consultation and Engagement	Disseminating of Project information in a manner that ensures that project information is understood, and feedback from Indigenous communities is based on actual knowledge of the issues being presented.	The proponent is taking steps to ensure the project information is understood. As described in Section 4.1.3 (Guiding Principles) “Documents and materials will use language that is easy to understand and free of technical jargon and, where feasible, key documents/presentations may be translated into the Indigenous language of participating communities” and in Section 4.4 (Key Communication and Engagement Tools) “Engagement will include opportunities for translation of communication materials into Ojibway, Oji-Cree and Cree languages to ensure clear understanding of the Project.” A Plain Language Summary of both the Draft and Final ToR has been prepared and is available on the Project website, in both English and Indigenous languages. Several newsletters for the project have also been prepared and have been translated to Indigenous languages. As described in Section 4.8.1 (Consultation Progress Reporting) of the Proposed ToR, the proponent will prepare written progress reports on the consultation activities associated with EA/IA milestones. These progress reports will show how feedback from Indigenous communities, is being incorporated to the EA/IA process. Community-specific sections of the progress reports will also be distributed to each Indigenous community. The proponent will respond to any questions or concerns raised by NDMNRF (now MNRF), MECP and/or Indigenous communities regarding the progress reports and revise the progress reports as appropriate.

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
Aroland First Nation Attawapiskat First Nation Mushkegowuk Tribal Council Nibinamik First Nation	Cumulative Effects	Concerns that the scope and methods of the cumulative effects assessment are not adequate to fully assess cumulative effects.	As described in Section 6.7 (Cumulative Effects Assessment) of the Proposed ToR, the EA/IA for the Project will include a cumulative effects assessment. The cumulative effects assessment will follow existing federal guidance, in the absence of clear provincial guidance. The scoping of the cumulative effects assessment will include other past, present or reasonably foreseeable projects and activities. The definition of 'Reasonably Foreseeable' in existing guidance is as follows: The action may proceed, but there is some uncertainty about this conclusion (the Canadian Environmental Assessment Agency's Operational Policy Statement Addressing Cumulative Environmental Effects under the *Canadian Environmental Assessment Act* recommends that at least these types of projects be considered). It also goes on to state that these other activities and projects could be directly associated with the project under review but are conditional on that project's approval. The proponent acknowledges that the scope and breadth of what activities and projects to be included in the cumulative effects assessment will be limited by available information and focus on regional concerns. The proponent will consult with government agencies to identify any already-approved projects that will be built in the future, and to consider their potential cumulative effects to the extent possible. If quantitative information about this project is unavailable, the proponent will include qualitative assessments of potential cumulative effects. A cumulative effects assessment depending on projects not yet foreseeable has the tendency to lose predictive certainty and degrade the value of the assessment to stakeholders and decision makers. At this time, the cumulative effects assessment scoping in the ToR covers the potential future conditions of known or reasonably foreseeable activities or projects. Relevant information generated through the Regional Assessment for the Ring of Fire Area will be used to inform the Project effects assessment, including the cumulative effects assessment, as the developed information becomes available. Additional details on the cumulative effects assessment will be presented in the Cumulative Effects Assessment Study Plan as described in Section 6.7.2 (Conducting a Cumulative Effects Assessment) of the Proposed ToR.
Attawapiskat First Nation Eabametoong First Nation	Guiding Principles for Consultation and Engagement	Concern about how the EA/IA will incorporate MFFN's Guiding Principles and WFN Elders' Principles.	The Consultation and Engagement Plan for the Project's EA has been developed in accordance with the guiding principles from WFN and MFFN as described in Section 4 (Consultation and Engagement) of the Proposed ToR. The basic guiding principles held by the two communities, while expressed differently, are very similar and intricately tied together. In keeping with the guiding principles that reflect the words of the MFFN Elders: › Kezhikanawabajikateg kaye ji tepwaaniwaang kekikinozhiwemakaang - "Everything on our land and water is living and needs to be respected" – As outlined in Section 1.5 (Purpose of the Environmental Assessment of the Proposed ToR), the proponent is conducting an Individual Environmental Assessment (EA/IA) to identify the potential effects of the Project, identify and recommend measures to avoid or minimize potential environmental effects, and identify opportunities to enhance benefits to the environment.

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
			› Kawininitojikateg nikan onajikewining ineke - “The Anishinabek relationship to the land should be seen as a cultured landscape; also an area that is continuously being used by the Anishinabek as a habitation and as a resource” – As described in Section 7.1 (Aboriginal and Treaty Rights and Interests) of the Proposed ToR, the EA/IA will include an assessment of effects on Aboriginal and Treaty Rights and Interests (ATRI). Details on the assessment will be included in the ATRI study plan, and data for this assessment will be collected through the IK program. › Kakina ji wiinda mawa nowaht anishinabek ka onjiwatch - “Engage the Anishinabek on all issues that affect our shared and communal lands” – As described in Section 4.1.1 (Consultation and Engagement - Purpose) of the Proposed ToR, the proponent is undertaking a consultation and engagement program to promote effective two-way communication between the proponent and members of potentially affected Indigenous communities; to present and receive information; and to identify and address issues and concerns related to the Project through mitigation and/or accommodation. The proponent also plans to collaborate with affected Indigenous communities through the IK Program described in Section 5 (Indigenous Knowledge) of the Proposed ToR. › Jih ishi kanawejikatey kakina kekon - “Respect the natural and Anishinawbe customs and teachings at all times” – MFFN and WFN have designed their consultation and engagement plan considering their guiding principles so they remain at the forefront of the EA/IA process. The proponent also plans to collaborate with affected Indigenous communities through the IK Program described in Section 5 (Indigenous Knowledge) of the Proposed ToR. We believe that the Indigenous Knowledge Program provides us with an opportunity to integrate Indigenous and Western knowledge into the assessment process in a truly meaningful way that will improve and enhance the overall assessment. › Chi Mamow waban ji kateg emishiinonaniwang mashkawisiinaniwang – “Looking at it together. In numbers there is strength” – The proponent plans to collaborate with affected Indigenous communities through the IK Program described in Section 5 (Indigenous Knowledge) of the Proposed ToR.

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
Mushkegowuk Tribal Council Kashechewan First Nation Weenusk First Nation Neskantaga First Nation Ginoogaming First Nation	Indigenous Input	Concerns over how input provided by Indigenous communities will be incorporated into the assessment.	The proponent will collect and include input provided by Indigenous communities during multiple stages of the EA/IA through the IK and Consultation and Engagement Programs.
Aroland First Nation Attawapiskat First Nation Mushkegowuk Tribal Council	Regional Assessment in the Ring of Fire Area	Concerns that the NRL Project EA/IA proceeds before the Regional Assessment in the Ring of Fire Area is completed.	The Ontario EA process is proponent-led. The proponent (MFFN and WFN, referred to collectively as 'the proponent') has entered into a Voluntary Agreement with the Minister of the Environment, Conservation and Parks (MECP, MFFN and WFN, 2020) under which the two First Nations have agreed to undertake an Individual EA for the Project under the Ontario *Environmental Assessment Act* (EA Act), which is the most comprehensive form of EA in Ontario. The decision to proceed with the provincial EA process for the Project is consistent with the agreement between the proponent and the Province of Ontario to proceed with the Project in accordance with provincial EA legislation, which entails completing the process in a timely manner. The proponent has also committed to realizing the Project's intended/perceived benefits for their respective communities, and the region as a whole, within a reasonable timeframe. Deferring/pausing the Project's EA does not align with these objectives. The proponent is taking the necessary steps to ensure meaningful consultation and engagement for the NRL Project. Some of the timelines for the ToR process are legislated in accordance with the Ontario EA Act and others are proponent-led. The Draft ToR was circulated to Indigenous communities, the public and provincial and federal agencies for feedback for a 30-day period on November 16, 2021. The review period was extended to the end of January 2022 for Indigenous communities. Feedback received was incorporated into the document, and the Proposed ToR was submitted to the MECP and made available for Indigenous and public review on April 29, 2022. While the ToR comment period is normally 30 days, the MECP extended the comment period to 60 days to allow for more time to review and comment on the Proposed ToR. Additional time was provided to Indigenous communities to December 14, 2022, at the request of some Indigenous communities for more time to carry out a thorough review of the Proposed ToR.

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
			In November 2020, the federal Minister of Environment and Climate Change (the Minister) determined that a Regional Assessment will be conducted in an area centered on the Ring of Fire mineral deposits in northern Ontario. The Minister directed the Impact Assessment Agency of Canada (the Agency) to engage with Indigenous groups, non-government organizations, the Province of Ontario and other federal departments to discuss appropriate activities, outcomes and spatial and temporal boundaries for the Regional Assessment. It is anticipated that the Regional Assessment will focus on future mine development activities and their potential effects (both positive and adverse), as these types of activities are considered the most likely future physical activities to be proposed and carried out in this region in the foreseeable future. Relevant information generated through the Regional Assessment for the Ring of Fire Area will be used to inform the NRL Project effects assessment, as the developed information becomes available. This may include informing the baseline studies, effects prediction, cumulative effects assessment, the consideration of possible mitigation and enhancement measures, and follow-up programs, as applicable. It is noted however that the completion of the Regional Assessment is not a requirement for the proponent to proceed with the EA/IA process for the Project. References: Minister of the Environment, Conservation and Parks, Marten Falls First Nation and Webequie First Nation (MECP, MFFN and WFN). 2020. Voluntary Agreement. Signed on October 28, 2020. Available: https://www.ontario.ca/page/northern-road-link-project#section-4
Aroland First Nation Attawapiskat First Nation Fort Albany First Nation	Regional Assessment in the Ring of Fire Area	The NRL Project EA/IA should not proceed until a comprehensive First Nation co-led and co-developed regional assessment is completed.	Completion of the Regional Assessment is not a requirement for the proponent to proceed with the EA/IA process for the Project.
Attawapiskat First Nation	Regional Assessment in the Ring of Fire Area	The MFCAR, WSR, and NRL projects should be included in the Regional Assessment in the Ring of Fire Area.	The Ontario EA process is proponent-led. The proponents for each of the three proposed all-season road projects (MFCAR [MFFN], WSR [WFN], and NRL [MFFN and WFN, collectively the “proponent”]) separately requested to enter into agreements with the Minister of the Environment, Conservation and Parks under the Ontario EA Act to make their respective projects subject to the requirements of the Ontario EA Act. As a result of those agreements, each of the three proposed road projects are undergoing Individual EAs, which is the most comprehensive form of EA in Ontario. The individual EA will include a cumulative effects assessment.

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
			As indicated by the Agency, the ongoing impact/environmental assessments for proposed road developments in Northern Ontario will continue according to their legislated processes and timelines (the Agency, 2022). The Regional Assessment scope will not include or duplicate these ongoing assessments, including their project-specific assessments of effects, analyses of the purpose and need for these projects, or other factors and components (the Agency, 2022). It is anticipated that the Regional Assessment will focus on future mine development activities and their potential effects (both positive and adverse), as these types of activities are considered the most likely future physical activities to be proposed and carried out in this region in the foreseeable future. Relevant information generated through the Regional Assessment for the Ring of Fire Area will be used to inform the NRL Project effects assessment, as the developed information becomes available. This may include informing the baseline studies, effects prediction, cumulative effects assessment, the consideration of possible mitigation and enhancement measures, and follow-up programs, as applicable. It is noted however that the completion of the Regional Assessment is not a requirement for the proponent to proceed with the EA/IA process for the Project. References: Impact Assessment Agency of Canada (the Agency). 2022. Regional Assessment in the Ring of Fire Area - Overview of Draft Agreement and Terms of Reference. Information Sessions: December 9, 17, 2021; January 17, 18, 19, 2022. Available: https://iaac-aeic.gc.ca/050/documents/p80468/142509E.pdf
Kashechewan First Nation Mushkegowuk Tribal Council Weenusk First Nation	Human Health	Concerns related to contamination of traditional food sources and the need for health assessments to model traditional Indigenous country food harvesters.	If the problem formulation step of the Human Health Risk Assessment (which is the initial component of the overall Human Health assessment) identifies that an assessment of country food consumption is required, a country foods tissue sampling program will be developed to generate primary data on potential Project-related contaminant levels in country foods. This program will involve working with Indigenous communities to collect appropriate tissue samples from commonly harvested country food items. If country food tissue sampling and chemical analysis are necessary, and Study Area diet information exists that suggests organ meats are frequently consumed, then efforts will be made to ensure that organs of harvested game or fish species are sampled and analyzed. If sufficient appropriate data are available, the Human Health Risk Assessment can include an exposure scenario that assumes an Indigenous human receptor who consumes only traditional country foods.

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
Kashechewan First Nation Mushkegowuk Tribal Council Weenusk First Nation	Indigenous Knowledge	Integration of IK into the EA process.	The ToR has been updated with details regarding incorporation of applicable information collected during the Indigenous Knowledge Program. Through the Consultation Plan and the Indigenous Knowledge Program, the proponent aims to collaborate with Indigenous communities in validating information utilized in the EAR/IS where applicable and in collecting data related to VCs and indicators identified as well as in characterizing baseline conditions, predicting potential project impacts, and determining appropriate mitigation and monitoring methods. The IK Guidance Document will be shared with the Indigenous Knowledge Program participants during the commencement of the Indigenous Knowledge Program and any feedback provided will be used to update the Guidance Document where applicable.
Marten Falls First Nation Muskegowuk Tribal Council Fort Albany First Nation	Peatlands	Concerns around impacts to peatlands. Complexity of the hydrology of the James Bay Lowlands, one of the world's largest wetlands and carbon sinks.	The EA/IA will identify potential effects and ways to prevent and/or mitigate potential effects to peatlands. The proponent recognizes the value and potential impacts to the peatlands in the James Bay Lowlands, and peatlands will be considered in the surface water, groundwater, vegetation, and climate change assessments. Various field studies are proposed to collect baseline data on wetlands, as described in Sections 7.2.4.2.3 (Proposed Baseline Studies – Groundwater), 7.2.5.2.3 (Proposed Baseline Studies – Surface Water), and 7.3.4.2.3 (Proposed Baseline Studies – Plants and Vegetation Communities) of the Proposed ToR. Further details on the wetland surveys and assessment will be provided in the applicable study plans.
Aroland First Nation Fort Albany First Nation Neskantaga First Nation	Project Splitting	The MFCAR, WSR, and NRL projects should be assessed as a single project.	The three proposed all-season road projects (MFCAR, WSR, and NRL) are not a single continuous road project from an Environmental Assessment (EA) process standpoint. The three proposed all-season road projects are distinct and unique, with different purposes designed to meet the specific objectives of their respective proponents. The Ontario EA process is proponent-led. The proponents for each of the three proposed all-season road projects (MFCAR [MFFN], WSR [WFN], and NRL [MFFN and WFN, collectively the "proponent"]) separately requested to enter into agreements with the Minister of the Environment, Conservation and Parks under the Ontario EA Act to make their respective projects subject to the requirements of the EA Act. As a result of those agreements, each of the three proposed road projects are undergoing Individual EAs, which is the most comprehensive form of EA in Ontario. The Individual EA will include a cumulative effects assessment. The data that will be considered will be the overall data set publicly available in the region to date as well as the data collected by the Project. This will enable the proponent to understand broad project cumulative impacts.

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
			Separating large projects into smaller ones (i.e., project splitting) has been attempted in the past by some proponents to: i) avoid regulatory thresholds like the federal Impact Assessment or, ii) have the ability to understate project impacts. The proponent is not doing either. The proponents chose to undertake separate projects because their purpose is different.
Aroland First Nation Nibinamik First Nation Ginoogaming First Nation	Study Areas	Concerns that the study areas are not adequate to properly assess potentially effects to Aboriginal and Treaty Rights and Interests.	A Preliminary Study Areas memorandum for Aboriginal and Treaty Rights and Interests will be provided to Indigenous communities for feedback.
Neskantaga First Nation	Lake Sturgeon	Lake Sturgeon, the oldest living fish species in Neskantaga's territory, carry great cultural and spiritual significance for Neskantaga. Lake Sturgeon are uniquely susceptible to habitat loss and disturbance. Concerns about how the conclusion was arrived at that conditions at the new proposed crossing (West Bridge) are expected to not be conducive to Lake Sturgeon spawning.	The proponent will identify further methods for determining habitat suitability for spawning sturgeon as the Project progresses that are appropriate. This will be added into the list of commitments made during the ToR process that will be addressed in the EA/IA. Community members from Marten Falls First Nation made the statement that the conditions at the new (west) proposed crossing are expected to not be conducive to Lake Sturgeon spawning based on their personal knowledge. However, it is well known that rapids are typically associated with Lake Sturgeon spawning habitat. Baseline fish habitat and fish community studies are ongoing and sections of the Attawapiskat River will be studied and will include a description of the upstream and downstream aquatic habitat and characterization of the fish community from background research and fish community sampling including standard methods such as seine netting, minnow traps, angling and eDNA. The crossings are preliminary and may be adjusted based on environmental and engineering considerations.
Mushkegowuk Tribal Council	Wildlife and Wildlife Habitat	Request for more detail to be incorporated from IK related to potential fragmentation of Caribou habitat. Barriers to caribou migration routes and disruption to calving grounds.	Through the Consultation Plan and the Indigenous Knowledge Program, the proponent aims to collaborate with Indigenous Communities in validating information utilized in the EAR/IS where applicable and in collecting data related to VCs and indicators. This includes characterizing baseline conditions, predicting potential project impacts including impacts to Caribou migration patterns and fragmentation of Caribou habitats, and determining appropriate mitigation and monitoring methods.

Indigenous Community or Group	Key Issue Raised	Summary of Issue	Proponent Response
Nibinamik First Nation	Women and Girls' Specific Analysis	The VCs do not include GBA+ or women and girls' specific analysis or criteria. In light of the recommendations of the Missing cand Murdered Indigenous Women and Girls National Inquiry, this should be distinctly identified as part of a specific VC and assessment process to ensure community safety and assess subjects such as increased risk of human trafficking, risk of violence or assault, etc.	Section 7.4.4.2.1 (Preliminary Baseline Description) of the Proposed ToR identifies safety concerns related to women and girls, specifically with respect to experience with resource development projects near Indigenous communities. Further, source documents listed in Section 7.4.4.2.2 (Background Information and Data Sources) identify resources that focus on these issues, which will be incorporated into the description of baseline conditions, and will inform the effects assessment and identification of suitable mitigation measures. Although it has not yet been determined that a federal Impact Assessment (IA) is required, the proponent expects the Project will be required to undergo a federal IA, as the Project is a designated project in accordance with the Physical Activities Regulations SOR/2019-285 under the *Impact Assessment Act* (IAA). If subject to a federal IA, the Project will be required to apply Gender Based Analysis Plus (GBA+) to the impact assessment.

Appendix E

Additional Information on Consultation and Engagement with Indigenous Communities and Groups

Table E-1: Consultation and Engagement by Indigenous Community, Organization or Group[1]

Date	Description of Activity	Results/Feedback Received
Animbiigoo Zaagi'igan Anishnaabek		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Aroland First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
January 10, 2022	Aroland First Nation emailed the proponent to confirm that they are unable to provide comments on the Draft ToR and requested that the Project not proceed to submission of a proposed ToR without adequate time, resources and information to consult with Aroland First Nation.	On April 13, 2022, the proponent emailed Aroland First Nation acknowledging receipt of their perspectives on the Draft ToR review period.
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Attawapiskat First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
December 22, 2021	Attawapiskat First Nation emailed the proponent and NDMNRF (now MINES) requesting an extension to the Draft ToR review period.	On December 24, 2021, the proponent emailed Attawapiskat First Nation responding to their concerns and advising that the Draft ToR review is a voluntary opportunity for Indigenous communities to engage and consult on the Project. A formal extension of the Draft ToR review period was not anticipated.

[1] This appendix summarizes key communications with Indigenous communities, organizations and groups. A detailed register of all communications is provided in the Record of Consultation.

Date	Description of Activity	Results/Feedback Received
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
Winter 2022	Several exchanges of email correspondence took place between the proponent and Attawapiskat First Nation legal counsel. Emails were received on January 21 and 28, February 11 and 25, March 11 and 22 and April 8, 2022. Correspondence was primarily related to the request from Attawapiskat First Nation legal counsel to pause the Project until such time as a regional impact assessment was completed, which could assess impacts from road development and future mining within the area.	The proponent responded, indicating that no direction had been received from the Agency to pause the Project and that the Agency maintains responsibility for federal regional assessments.
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Constance Lake First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
Chiefs of Ontario		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Eabametoong First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
December 23, 2021	Eabametoong First Nation requested an extension to the Draft ToR review period.	—

Date	Description of Activity	Results/Feedback Received
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Fort Albany First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
December 1, 2021	Fort Albany First Nation confirmed receipt of the Draft ToR and expressed great interest in the Project and desire to provide comments on the Draft ToR but required funding to conduct a review.	—
December 2, 2021	Fort Albany First Nation emailed the proponent requesting an extension to the Draft ToR review period.	On December 13, 2021, the proponent emailed Fort Albany First Nation providing details on capacity funding options available through MINES for the Project. A formal extension of the Draft ToR review period was not anticipated.
December 22, 2021	Fort Albany First Nation emailed to confirm they could not review the Draft ToR due to lack of funding and the short time period being offered.	On December 24, 2021, the proponent emailed Fort Albany First Nation providing details on capacity funding options available through MINES for the Project. A formal extension of the Draft ToR review period was not anticipated. The proposed ToR is planned for release in Spring 2022 and the proponent hopes Fort Albany First Nation will be able to provide comments at that time.
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Ginoogaming First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—

Date	Description of Activity	Results/Feedback Received
January 28, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	On January 31, 2022, Ginoogaming First Nation emailed the proponent stating they were aware of the Draft ToR review period but did not have time or resources to review and would be unable to provide comments.
February 11, 2022	Notice of Open House #2 letter sent to community.	__
April 29, 2022	Notice of Proposed ToR sent to community.	__
Independent First Nations Alliance		
May 4, 2021	ToR Notice of Commencement letter sent to community.	__
August 31, 2021	Notice of Open House #1 letter sent to community.	__
November 24, 2021	Notice of Draft ToR letter sent to community.	__
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	__
February 11, 2022	Notice of Open House #2 letter sent to community.	__
April 29, 2022	Notice of Proposed ToR sent to community.	__
Kasabonika Lake First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	__
August 31, 2021	Notice of Open House #1 letter sent to community.	__
November 24, 2021	Notice of Draft ToR letter sent to community.	__
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	__
February 11, 2022	Notice of Open House #2 letter sent to community.	__
April 29, 2022	Notice of Proposed ToR sent to community.	__
Kaschechewan First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	__
August 31, 2021	Notice of Open House #1 letter sent to community.	__
November 24, 2021	Notice of Draft ToR letter sent to community.	__
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	__
February 11, 2022	Notice of Open House #2 letter sent to community.	__
April 29, 2022	Notice of Proposed ToR sent to community.	__

Date	Description of Activity	Results/Feedback Received
Kingfisher Lake First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Kitchenuhmaykoosib Inninuwug First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Long Lake #58 First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Marten Falls First Nation		
April 22, 2021	A meeting was held with MFFN community members through a live virtual event to answer questions about the Project.	Community members were provided an opportunity to have their questions or comments answered by the Project Team.
May 4, 2021	ToR Notice of Commencement letter sent to community.	—

Date	Description of Activity	Results/Feedback Received
June 15, 2021	A meeting was held with representatives of MFFN to discuss proposed crossings of Attawapiskat River including sensitive areas to avoid.	MFFN provided information expressing the importance of the Attawapiskat River to past, current and future uses. Sensitive information was provided on adjacent sensitive moose and lake sturgeon habitat. Alternative candidate crossing sites of the Attawapiskat River were provided by the community.
August 18, 2021	Meeting with MFFN re: Attawapiskat River crossings.	Meeting to discuss the importance of the Attawapiskat River and possible crossing locations. MFFN members provided insight on potential crossing locations.
August 31, 2021	Notice of Open House #1 letter sent to community.	—
September 10, 2021	Proponent presented an “Overview of the Northern Road Link Project and ToR” to the MFFN community.	—
October 27, 2021	Proponent presented an “Overview of the Northern Road Link Project and ToR” to the MFFN Chief and Council.	—
November 16, 2021	The proponent held a community meeting in MFFN to present a review of the Project corridor alternatives.	Members of the community asked questions about portaging, skidoo routes, culturally significant sites of Kitchi Lake, gravesites, timeline for road construction, aggregates, mutual engagement, urban sprawl, housing for construction works and the EA process. The proponent agreed to send copies of the presentation to the community. The proponent provided answers to questions where possible.
November 24, 2021	Notice of Draft ToR letter sent to community.	—
December 1, 2021	The proponent made an off-reserve presentation to members of MFFN and WFN to provide updates on the Project.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—

Date	Description of Activity	Results/Feedback Received
November 30, 2022	The proponent made an off-reserve presentation to members of MFFN and WFN to provide updates on the Project.	Community members were provided an opportunity to have their questions answered by the Project Team and to fill out comment forms.
Matawa Tribal Council		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Métis Nation of Ontario		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Métis Nation of Ontario – Region 2		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
November 30, 2021	MNO Region 2 informed the proponent they wish to be kept informed of the Project and would request a meeting if the need should arise.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—

Date	Description of Activity	Results/Feedback Received
Métis Nation of Ontario – Greenstone Métis Council		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Mushkegowuk Council		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
December 2, 2021	Mushkegowuk Council sent an email requesting an extension to the Draft ToR comment period.	On December 8, 2021, the proponent responded noting that the comment period was 45 days and asked if Mushkegowuk Council would be providing comments. Mushkegowuk confirmed they planned on providing comments.
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Neskantaga First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
December 1, 2021	Neskantaga First Nation emailed the proponent to understand how the lead communication contact for their community was determined.	On December 2, 2021, the proponent emailed to confirm who the correct contact should be for the community.
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—

Date	Description of Activity	Results/Feedback Received
Nibinamik First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	__
August 31, 2021	Notice of Open House #1 letter sent to community.	__
November 24, 2021	Notice of Draft ToR letter sent to community.	__
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	__
February 11, 2022	Notice of Open House #2 letter sent to community.	__
April 29, 2022	Notice of Proposed ToR sent to community.	__
Nishnawbe Aski Nation (Grand Council Treaty #9)		
May 4, 2021	ToR Notice of Commencement letter sent to community.	__
August 31, 2021	Notice of Open House #1 letter sent to community.	__
November 24, 2021	Notice of Draft ToR letter sent to community.	__
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	__
February 11, 2022	Notice of Open House #2 letter sent to community.	__
April 29, 2022	Notice of Proposed ToR sent to community.	__
Nokiiwin Tribal Council		
May 4, 2021	ToR Notice of Commencement letter sent to organization.	__
August 31, 2021	Notice of Open House #1 letter sent to organization.	__
November 24, 2021	Notice of Draft ToR letter sent to organization.	__
January 8, 2022	Letter sent from proponent to organization advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	__
February 11, 2022	Notice of Open House #2 letter sent to organization.	__
April 29, 2022	Notice of Proposed ToR sent to organization.	__
Red Sky Independent Métis Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	__
August 31, 2021	Notice of Open House #1 letter sent to community.	__
November 24, 2021	Notice of Draft ToR letter sent to community.	__
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	__
February 11, 2022	Notice of Open House #2 letter sent to community.	__
April 29, 2022	Notice of Proposed ToR sent to community.	__

Date	Description of Activity	Results/Feedback Received
Shibogama First Nations Council		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Wapekeka First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Wawakapewin First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Webequie First Nation		
April 22, 2021	A meeting was held with WFN community member through a live virtual event to answer questions about the Project.	Opportunity for community members to provide comments and ask questions to the proponent. No issues raised.
May 4, 2021	ToR Notice of Commencement letter sent to community.	—

Date	Description of Activity	Results/Feedback Received
June 25, 2021	Virtual community meeting with WFN to introduce project and explain there are three separate projects (Marten Falls Community Access Road (MFCAR), Northern Road Link (NRL) and Webequie Supply Road (WSR)).	Opportunity for community members to provide comments and ask questions to the proponent. No issues raised.
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 10, 2021	The proponent held a community meeting with WFN to present an update on the Project.	Questions related to what the difference between the EA and IA was for the Project were raised as well as questions surrounding Bill C-15. The proponent provided responses to questions raised about the Project.
November 17, 2021	The proponent held a community meeting with WFN to present an update on the Project.	A short explanation of the federal IA process was provided to illustrate the general differences between the provincial and federal EA/IA processes. A description of valued components and baseline studies was provided, and the consultation team went through a list of some of the studies being undertaken as part of the EA to emphasize that the assessment is very comprehensive. No questions were asked.
November 24, 2021	Notice of Draft ToR letter sent to community.	—
December 1, 2021	The proponent made an off-reserve presentation to members of MFFN and WFN to provide updates on the Project.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
November 30, 2022	The proponent made an off-reserve presentation to members of MFFN and WFN to provide updates on the Project.	Community members were provided an opportunity to have their questions answered by the Project Team and to fill out comment forms.
Weenusk (Peawanuck) First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—

Date	Description of Activity	Results/Feedback Received
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Windigo First Nation Council		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—
Wunnumin Lake First Nation		
May 4, 2021	ToR Notice of Commencement letter sent to community.	—
August 31, 2021	Notice of Open House #1 letter sent to community.	—
November 24, 2021	Notice of Draft ToR letter sent to community.	—
January 8, 2022	Letter sent from proponent to community advising that additional time to review the Draft ToR was being provided. Comments on the Draft ToR were requested by January 31, 2022.	—
February 11, 2022	Notice of Open House #2 letter sent to community.	—
April 29, 2022	Notice of Proposed ToR sent to community.	—

Appendix F

Summary of Potential Effects and Preliminary Proposed Mitigation Measures

Table F-1: Summary of Potential Effects and Preliminary Proposed Mitigation Measures

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
Fish and Fish Habitat Under the *Fisheries Act*		
Construction	› Physical loss or harmful destruction of fish habitat during construction (e.g., permanent loss underneath bridge piers or embankment roads); › Physical change or harmful alteration of fish habitat through changes to shape of streambed, bank composition, vegetation community, and/or bank stability due to construction; › Harmful disruption or reductions in habitat accessibility and/or increased habitat fragmentation for fish life processes due to crossing construction; › Changes in fish and aquatic species (including Species at Risk [SAR] habitat) habitat due to water quality changes such as changes in temperature regime, flow regime, increased contaminants due to accidental releases, or changes to water quality as a result of erosion/sedimentation. This in turn may lead to changes in survival and reproductive success; › Death of fish (including SAR), aquatic species, and/or eggs caused by increased turbidity, physical contact with construction materials and equipment, blasting operations, stranding during temporary isolations, and/or accidental releases of contaminants; › Increased concentrations of contaminants in fish tissue; › Increased recreational and sustenance angling pressure due to increased human access (fish and aquatic species mortality/injury); › Increased access may lead to greater introductions of garbage and deleterious substances; › Effects on fish and aquatic species from invasive aquatic life introduced via construction or by increased human access.	› Wherever possible, avoid any in-water or near-water work during the Ontario Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat (as appropriate depending on the species present, [DFO, 2013]). This mitigation measure will reduce the risk of the death of fish. If in-water work is required during this period, DFO and MNRF will be consulted well in advance to request an extension to the fisheries timing window. Depending on the sensitivity of the water body, time of year and the species present an extension may not be granted; › Comply with the fish and fish habitat protection provisions of the *Fisheries Act* by incorporating measures to avoid: - Causing the death of fish; and - Harmful alteration, disruption or destruction of fish habitat in your work, undertaking or activity (GoC, 2019); › Minimize the footprint of in-water works, where practical to reduce loss and/or degradation of fish habitat; › Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to fish habitat, where feasible; › Avoid placing project infrastructure in specialized habitat of Lake Sturgeon (e.g., spawning/rearing habitat), where possible; › Isolate in-water work locations, with erosion and sedimentation control measures implemented to reduce the risk of harmful alteration, destruction or disruption (HADD) of fish and fish habitat as well as reduce the risk of the death of fish; › Retain an environmental monitor during in-water work as required; › Maintain fish passage in all watercourses through the installation of culverts, bridges, and/or fish passage structures to reduce disruption to fish life cycles; › Conduct pumping using a pump equipped with fish screens in accordance with DFO guidelines (2000); › Maintain pre-disturbance flow and water levels in all watercourses wherever possible; › Minimize clearing of riparian habitat to reduce habitat loss and/or degradation; › Complete fish salvages in isolations prior to work taking place; › Limit public access to watercourses from the roadway to discourage fishing pressure; › Engage DFO and MECP to determine if the Project will require permits under the *Fisheries Act* or the ESA; › Provide environmental awareness and orientation for personnel and contractors on site so they are aware of potential hazards. Include maps to show relevant attributes, such as fish habitat, SAR occurrences, no-go zones, limits of construction, etc. and providing information of fish species that may be present in certain areas; › Construction activity specific Stop Work Protocols that allow for the temporary cessation of Project-related activities and account for site-specific species and observation conditions; and › Specification of construction activities for which fish monitoring would be necessary and procedures for monitoring construction activities by a qualified person. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for fish and fish habitat, vegetation, spill prevention and response, waste management, erosion and sediment control, and site restoration to reduce the risk of the death of fish or the degradation and/or loss of fish habitat.
Operations	› Increased recreational and sustenance angling pressure due to increased human access (fish and aquatic species mortality/injury); › Increased access may lead to greater introductions of garbage, litter, and deleterious substances; and › Deposition of deleterious substances leading to impacts to fish habitat or mortality from vehicles utilizing the roadway and/or accidental releases of contaminants).	› Limit public access to watercourses from the roadway to discourage fishing pressure; and › Enable waste management procedures for clean-up of deleterious materials. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for spill prevention and response and waste management to reduce the risk of the death of fish or the degradation and/or loss of fish habitat.
Migratory Birds under the *Migratory Birds Convention Act*, 1994		
Construction	› Permanent habitat loss directly through vegetation clearing required for road construction and ancillary features such as permanent access roads, aggregate extraction, turnaround locations, maintenance yards, and others. This includes loss of wetland habitat, upland habitat, forested habitat, and eskers, all which may contain different assemblages of migratory birds. Species that utilize upland esker areas, such as nightjars, raptors, and upland songbirds might be more affected if esker habitats are preferred for the route; › Temporary habitat loss or restriction due to construction/placement of ancillary infrastructure (e.g., laydown areas, camps, temporary access, roads); › Habitat degradation caused by alterations of hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), habitat connectivity, and habitat fragmentation. This in turn may lead to changes in survival and reproductive success;	› Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to rare habitats (such as habitat loss and degradation along eskers), where feasible; › Avoid any vegetation clearing between April 21 and August 14, within the nesting period for nesting zone C6 to reduce the risk of bird death. Migratory birds are most likely to be nesting in this timeframe and are at greatest risk of direct impacts. If vegetation clearing is required during this period, an avian biologist will be retained to conduct a survey for nesting activities/behaviors to manage risks to active nests protected by the MBCA; › Establish setbacks around sensitive species and/or habitat features during construction to reduce the risk of bird death or nest abandonment; › Manage vegetation along the roadway to reduce the risk of birds nesting along the corridor and reduce the risk of bird death;

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
	› Death of birds or reduction in habitat quality as a result of accidental releases of contaminants; › Sensory disturbance related to proximity (noise) impacts from construction equipment, roadway traffic, which can affect habitat suitability and use. More sensitive bird species may avoid areas with high noise temporarily or permanently; and › Death of birds and/or eggs, including SAR and/or traditional use birds, as a result of construction (vegetation clearing) or vehicle collision.	› Establish reduced speed limits and signage in areas where collisions with avian species are most likely to reduce the risk of bird death; › Implement noise and light abatement measures to control operational sensory disturbances; › Develop a protocol to manage attractant waste to reduce attracting birds and causing bird death; and › Acquire permits as required from provincial and federal regulators. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices, for wildlife, vegetation, noise, spill prevention and response, waste management, traffic, and site restoration including temporary access roads, construction camps and laydown areas to reduce the potential for death of birds, habitat loss, and habitat degradation.
Operations	› Habitat degradation caused by alterations of hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), habitat connectivity, and habitat fragmentation. This in turn may lead to changes in survival and reproductive success; › Death of birds or reduction in habitat quality as a result of accidental releases of contaminants; › Sensory disturbance related to proximity (noise and/or light) impacts from maintenance equipment, roadway traffic, and lighted areas which can affect habitat suitability and use. More sensitive bird species may avoid areas with high noise temporarily or permanently; › Death of birds and/or eggs, including SAR and/or traditional use birds, as a result of vehicle collision; › Attraction of bird species to the road corridor (e.g., food waste, light causing insect attraction) which can affect predator-prey relationships and thus bird survival and reproduction; and › Increased harvest of wildlife, including SAR by humans for recreational or traditional use due to increased public access.	› Avoid any vegetation clearing between April 21 and August 14, within the nesting period for nesting zone C6. Migratory birds are most likely to be nesting in this timeframe and are at greatest risk of direct impacts. If vegetation clearing is required during this period, an avian biologist will be retained to conduct a survey for nesting activities/behaviors to manage risks to active nests protected by the MBCA; › Establish setbacks around sensitive species and/or habitat features during construction; › Manage vegetation along the roadway to reduce the risk of birds nesting along the corridor; › Establish reduced speed limits and signage in areas where collisions with avian species are most likely; › Develop a protocol to manage attractant waste; › Implement noise and light abatement measures to control operational sensory disturbances; and › Acquire permits as required from provincial and federal regulators. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices, for wildlife, vegetation, noise, spill prevention and response, waste management, traffic, and site restoration.
Cultural Heritage Resources		
Construction	› Disturbance, damage, or loss of, registered or known archaeological sites, burial sites and sacred sites; › Disturbance, damage, or loss of, built heritage resources; and › Disruption of cultural heritage landscapes by introduction of physical, visual, audible or atmospheric elements that are not in keeping with the character and setting of cultural heritage resources.	› Establish setbacks around identified cultural heritage resources; and › Monitoring of areas of archaeological potential during construction to identify archaeological deposits if present. A Cultural Heritage Baseline Study and Preliminary Impact Assessment will be carried out for the Project. Built heritage resources and cultural heritage landscapes will be identified through a review of existing published data and consultation with Indigenous Communities and other stakeholders and agencies. The Cultural Heritage Baseline Study and Impact Assessment will identify and describe potential project-specific impacts to the known and potential archaeological, built heritage resources, and cultural heritage landscapes, and will recommend measures to avoid or mitigate potential negative impacts. The proposed mitigation will inform the next steps of project planning and design. The Cultural Heritage Baseline Study and Preliminary Impact Assessment for the Project will include a Stage 1 Archaeological Assessment. Should results of the Stage 1 archaeological assessment confirm archaeological potential within the corridor of the preferred alternative route, a Stage 2 Archaeological Assessment will be completed as early as possible before detailed Project design is completed. The results of the Stage 2 archaeological assessment will inform the need for further archaeological investigations where the effects to identified archaeological resources cannot be avoided through detail design. The Stage 2 report will include recommendations for management of archaeological resources that can be avoided, as well as recommendations for a process for dealing with incidental finds. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices, for cultural heritage resources, including a protocol for chance finds.
Operations	› Disruption of cultural heritage landscapes by introduction of physical, visual, audible or atmospheric elements that are not in keeping with the character and setting of cultural heritage resources.	Mitigation measures during operations for cultural heritage resources are partially anticipated to be linked to mitigation measures for the Aboriginal and Treaty Rights and Interests. In addition, an Aboriginal Rights and Interests Impact Management Plan will be developed, specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous Communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects listed. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices, for cultural heritage resources, including a noise management plan.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
Aboriginal and Treaty Rights and Interests - Indigenous Land and Resource Use		
Construction	Potential direct effects to ILRU that may result from the Project may include but are not limited to: › Project-related alteration/change to or loss of sites and areas used for rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, teaching) can interfere with ILRU; › Project-related disturbance to or loss of natural resources used for rights-based activities and other interests can interfere with ILRU; › Project-related activities that have the potential to impact perceived confidence in the quality of natural resources used for rights-based activities and other interests can interfere with ILRU; and › Project-related activities that have the potential to impact access to sites and areas for rights-based activities and other interests can interfere with ILRU. In addition, potential indirect effects on ILRU may include but not be limited to: › Changes in the rights-based economy related to changes in the pursuit of traditional activities that are monetized (e.g., trapping); › Increased economic burden on Indigenous communities related to changes in the pursuit and consumption of country foods and associated increased reliance on market foods; › Changes in the atmospheric environment (air quality) and or sensory disturbance (noise, vibration) related to construction could affect the availability and/or quality (or perceived quality) of resources that are harvested or gathered; › Changes in surface and/or groundwater quality and/or quantity could affect the availability and/or quality (or perceived quality) of resources that are harvested or gathered and/or affect culturally significant species; › Vegetation clearing/management associated with the construction phase could result in a loss of habitat for species that are harvested or gathered and/or culturally significant species; › An increase in hunting or fishing pressure by non-Indigenous people accessing the area could affect the availability of wildlife and fish that are harvested by Indigenous community members; › Changes in the atmospheric environment (air quality) and/or sensory disturbance (noise, vibration) related to the construction phase could affect the Indigenous experience of being on the land; › Changes in the visual landscape related to the construction phase could affect the Indigenous experience of being on the land; › Changes or effects to archaeological sites and resources, built heritage resources, and/or cultural heritage landscapes could affect the Indigenous experience of being on the land and/or the pursuit and teaching of rights-based activities and cultural practices; and › The effect of accidental releases on the availability and/or quality (or perceived quality) of resources that are harvested or gathered and/or affect culturally significant species during the construction phase.	Mitigation measures for ILRU are partially anticipated to be linked to mitigation measures for other disciplines, as outlined in Sections 20, 23, and 24 of the Initial Project Description. In addition to the mitigation measures outlined in those sections, the proponent will engage with Indigenous communities and organizations to develop an Aboriginal Rights and Interests Impact Management Plan specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects to rights-based activities and other interests. The Aboriginal Rights and Interests Impact Management Plan will further describe cross-cultural awareness training for staff and on-the-ground personnel, which will be developed in collaboration with participating Indigenous communities and groups. This training is expected to build awareness and reduce potential adverse interactions with Indigenous communities during construction.
Operations	Potential direct effects to ILRU that may result from the Project may include but are not limited to: › Project-related alteration/change to or loss of sites and areas used for rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, teaching) can interfere with ILRU; › Project-related disturbance to or loss of natural resources used for rights-based activities and other interests can interfere with ILRU; › Project-related activities that have the potential to impact perceived confidence in the quality of natural resources used for rights-based activities and other interests can interfere with ILRU; and › Project-related activities that have the potential to impact access to sites and areas for rights-based activities and other interests can interfere with ILRU. In addition, potential indirect effects on ILRU may include but not be limited to: › Changes in the rights-based economy related to changes in the pursuit of traditional activities that are monetized (e.g., trapping); › Increased economic burden on Indigenous Communities related to changes in the pursuit and consumption of country foods and associated increased reliance on market foods; › Changes in the atmospheric environment (air quality) and or sensory disturbance (noise, vibration) related to operation could affect the availability and/or quality (or perceived quality) of resources that are harvested or gathered; › Changes in surface and/or groundwater quality and/or quantity could affect the availability and/or quality (or perceived quality) of resources that are harvested or gathered and/or affect culturally significant species;	Mitigation measures for ILRU are partially anticipated to be linked to mitigation measures for other disciplines, as outlined in Sections 20, 23, and 24 of the Initial Project Description. In addition to the mitigation measures outlined in those sections, the proponent will engage with Indigenous communities and organizations to develop an Aboriginal Rights and Interests Impact Management Plan specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects to rights-based activities and other interests. The Aboriginal Rights and Interests Impact Management Plan will further describe cross-cultural awareness training for staff and on-the-ground personnel, which will be developed in collaboration with participating Indigenous communities and groups. This training is expected to build awareness and reduce potential adverse interactions with Indigenous communities during operations.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
	› Vegetation clearing/management associated with the operations phase could result in a loss of habitat for species that are harvested or gathered and/or culturally significant species; › An increase in hunting or fishing pressure by non-Indigenous people accessing the area could affect the availability of wildlife and fish that are harvested by Indigenous community members; › Changes in the atmospheric environment (air quality) and/or sensory disturbance (noise, vibration) related to the operations phase could affect the Indigenous experience of being on the land; › Changes in the visual landscape related to the operations phase could affect the Indigenous experience of being on the land; › Changes or effects to archaeological sites and resources, built heritage resources, and/or cultural heritage landscapes could affect the Indigenous experience of being on the land and/or the pursuit and teaching of rights-based activities and cultural practices; › Changes in climate could affect the availability of resources that are harvested or gathered and the pursuit and teaching of rights-based activities and cultural practices; and › The effect of accidental releases on the availability and/or quality (or perceived quality) of resources that are harvested or gathered and/or affect culturally significant species during the operations phase.	
Aboriginal and Treaty Rights and Interests - Cultural Continuity and Well-being		
Construction	The following potential direct effects may result from the Project on cultural continuity and well-being: › Project-related disturbance to or loss of culturally important sites and areas (e.g., ceremonial sites, place names, teaching sites, archaeological sites) can interfere with cultural continuity and well-being (the ability to practice and transmit cultural traditions such as activities and teaching); › Project-related alteration/change to sufficient availability or loss of access to culturally significant sites and areas (e.g., ceremonial sites, place names, teaching sites, important harvesting sites and areas) and resources (e.g., culturally significant species) can interfere with cultural continuity and well-being; › Project-related alteration/change to safe access to travel routes for practicing of rights within the cultural landscapes can interfere with cultural continuity and well-being; › Project-related activities which can potentially increase access by non-Indigenous people to sites and areas that were previously perceived as having a sense of remoteness (and an experience of being on the land free from disturbance) including the perception of availability and fragmentation of land for rights-based activities can interfere with cultural continuity and well-being; and › Project-related activities that can potentially impact the continued practice of cultural traditions and way of life can interfere with cultural continuity and well-being. In addition, potential indirect effects on cultural continuity and well-being may include but not be limited to: › Changes in food security and the diet of Indigenous community members and associated potential effects on human health related to a decrease in country food consumption/increase in market food consumption; › Changes to family economics related to changes in the pursuit and consumption of country foods, as well as access (financial and logistical) to market foods and other essentials; › Changes in community well-being (e.g., social issues, family relationships, community cohesion) related to changes in access to family members and friends, as well as services outside the community; › Changes in the ability of community members to protect and maintain the Indigenous culture through teaching and the transfer of cultural knowledge to others, and protection and proliferation of the Indigenous language; › Changes in community well-being could affect the pursuit and teaching of rights-based activities and cultural practices; › Changes in human health could affect the pursuit and teaching of traditional activities and cultural practices, as well as experiences on the land; › Changes in the social and economic environment could affect mental and psychological health and could affect outlook of the future (restrictions and/or opportunities); and › Changes or effects on archaeological sites and resources, built heritage resources, and/or cultural heritage landscapes could affect the Indigenous experience of being on the land and/or the pursuit and teaching of rights-based activities and cultural practices. › The effect of accidental releases on the availability and/or quality (or perceived quality) of access to culturally important sites and areas during the construction phase.	Mitigation measures for cultural continuity and well-being are partially anticipated to be linked to mitigation measures for other disciplines, as outlined in Sections 20, 23, and 24 of the Initial Project Description. In addition to the mitigation measures outlined in those sections, the proponent will engage with Indigenous communities and organizations to develop an Aboriginal Rights and Interests Impact Management Plan specific to the rights and interests-based activities of participating Indigenous communities pertaining to cultural continuity and community well-being. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects to cultural and interests-based activities. The Aboriginal Rights and Interests Impact Management Plan will further describe cross-cultural awareness training for staff and on-the-ground personnel, which will be developed in collaboration with participating Indigenous communities and groups where applicable. This training is expected to build awareness and reduce potential adverse interactions with Indigenous communities during construction.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
Operations	The following potential direct effects may result from the Project on cultural continuity and well-being: › Project-related disturbance to or loss of culturally important sites and areas (e.g., ceremonial sites, place names, teaching sites, archaeological sites) can interfere with cultural continuity and well-being (the ability to practice and transmit cultural traditions such as activities and teaching); › Project-related alteration/change to sufficient availability or loss of access to culturally significant sites and areas (e.g., ceremonial sites, place names, teaching sites, important harvesting sites and areas) and resources (e.g., culturally significant species) can interfere with cultural continuity and well-being; › Project-related alteration/change to safe access to travel routes for practicing of rights within the cultural landscapes can interfere with cultural continuity and well-being; › Project-related activities which can potentially increase access by non-Indigenous people to sites and areas that were previously perceived as having a sense of remoteness (and an experience of being on the land free from disturbance) including the perception of availability and fragmentation of land for rights-based activities can interfere with cultural continuity and well-being; and › Project-related activities that can potentially impact the continued practice of cultural traditions and way of life can interfere with cultural continuity and well-being. In addition, potential indirect effects on cultural continuity and well-being may include but not be limited to: › Changes in food security and the diet of Indigenous community members and associated potential effects on human health related to a decrease in country food consumption/increase in market food consumption; › Changes to family economics related to changes in the pursuit and consumption of country foods, as well as access (financial and logistical) to market foods and other essentials; › Changes in community well-being (e.g., social issues, family relationships, community cohesion) related to changes in access to family members and friends, as well as services outside the community; › Changes in the ability of community members to protect and maintain the Indigenous culture through teaching and the transfer of cultural knowledge to others, and protection and proliferation of the Indigenous language; › Changes in community well-being could affect the pursuit and teaching of rights-based activities and cultural practices; › Changes in human health could affect the pursuit and teaching of traditional activities and cultural practices, as well as experiences on the land; › Changes in the social and economic environment could affect mental and psychological health and could affect outlook of the future (restrictions and/or opportunities); › Changes or effects on archaeological sites and resources, built heritage resources, and/or cultural heritage landscapes could affect the Indigenous experience of being on the land and/or the pursuit and teaching of rights-based activities and cultural practices; › Changes in climate could affect the availability of resources that are harvested or gathered and the pursuit and teaching of rights-based activities and cultural practices; and › The effect of accidental releases on the availability and/or quality (or perceived quality) of access to culturally important sites and areas during the operations phase.	Mitigation measures for cultural continuity and well-being are partially anticipated to be linked to mitigation measures for other disciplines, as outlined in Sections 20, 23, and 24 of the Initial Project Description. In addition to the mitigation measures outlined in those sections, the proponent will engage with participating Indigenous communities and organizations to develop an Aboriginal Rights and Interests Impact Management Plan specific to the rights and interests-based activities of participating Indigenous communities pertaining to cultural continuity and community well-being. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects to cultural and interests-based activities. The Aboriginal Rights and Interests Impact Management Plan will further describe cross-cultural awareness training for staff and on-the-ground personnel, which will be developed in collaboration with participating Indigenous communities and groups where applicable. This training is expected to build awareness and reduce potential adverse interactions with Indigenous communities during operations.
Human Health*		
Construction	› Changes in local air quality due to road construction may affect human health; › Changes in local drinking water quality due to road construction may affect human health; › Changes in local soil quality due to road construction may affect human health; and › Changes to contaminant levels in harvested country food items due to road construction may affect human health.	› Recommended air quality mitigation measures; › Recommended soil quality mitigation measures; and › Recommended water quality mitigation measures. Should mitigation for human health be necessary, collaboration with these other disciplines would be required in order to determine appropriate and practical mitigation measures. Mitigation measures for human health are partially anticipated to be linked to mitigation measures for Aboriginal Treaty Rights and Interests, and the socio-economic environment. An Aboriginal Rights and Interests Impact Management Plan will be developed specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects listed.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
Operations	› Changes in local air quality due to road operation may affect human health; › Changes in local drinking water quality due to road operation may affect human health; › Changes in local soil quality due to road operation may affect human health; and › Changes to contaminant levels in harvested country food items due to road operation may affect human health.	› Recommended air quality mitigation measures; › Recommended soil quality mitigation measures; and › Recommended water quality mitigation measures. Should mitigation for human health be necessary, collaboration with these other disciplines would be required in order to determine appropriate and practical mitigation measures. Mitigation measures for human health are partially anticipated to be linked to mitigation measures for Aboriginal Treaty Rights and Interests, and the socio-economic environment. An Aboriginal Rights and Interests Impact Management Plan will be developed specific to the rights-based activities and other interests (e.g., cultural activities, hunting, trapping, fishing, gathering, and teaching) exercised by participating Indigenous communities. This management plan will outline mitigation measures to avoid, minimize, reduce, and/or offset potential direct and indirect effects listed.
Socio-Economic Environment		
Construction	**Regional and Local Economy** › Changes in labour force participation and unemployment; › Changes to training and education programs; › Changes in income levels; › Changes in living costs including prices of goods; › Changes in municipal government revenues and costs; and › Changes to area (ha) of significant aggregate deposits.	**Regional and Local Economy** › Implement skills inventory, training and skills development workshops within local communities; and › Education, training and hiring practices to encourage the employment of local workers, utilizing the Northern Ontario network of Indigenous Training Organizations such as the Indigenous Skills and Employment Training network. Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.
	Community Services and Infrastructure › Changes in demand for accommodations and affordability; › Changes in demand on health care services; › Changes in demand on major roads and highway infrastructure; and › Changes in demand on airports.	**Community Services and Infrastructure** › Work with local government authorities and health and emergency service organizations to plan for anticipated changes in population and service demand from the Project. Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.
	Land Use and Recreation › Changes in outdoor recreation use; and › Changes to number and area (ha) of Provincial Parks, ANSI, and Conservation Reserves affected.	**Land Use and Recreation** › Work with government authorities, local communities and business owners to develop local and regional strategy that addresses changes to outdoor recreation use. Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.
	Community Safety › Changes to participation in social and/or cultural events; › Changes in crime rates; › Changes in rates of domestic violence, sexual and physical assault; and › Changes in levels of substance use (e.g., drugs, alcohol).	**Community Safety** › Engagement with local communities, government entities and local organizations to implement better access to health and addiction services, and the improvement of relationships between justice sector professionals (local police and Indigenous Peoples) to strengthen community-based policing in local communities. Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.
Operations	**Regional and Local Economy** › Changes in labour force participation and unemployment; › Changes to training and education programs; › Changes in income levels; › Changes in living costs including prices of goods; › Changes in municipal government revenues and costs; and › Changes to area (ha) of significant aggregate deposits.	**Regional and Local Economy** › Implement skills inventory, training and skills development workshops within local communities; › Education, training and hiring practices to encourage the employment of local workers, utilizing the Northern Ontario network of Indigenous Training Organizations such as the Indigenous Skills and Employment Training network. Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.
	Community Services and Infrastructure › Changes in demand for accommodations and affordability; › Changes in demand on health care services; › Changes in demand on major roads and highway infrastructure; and › Changes in demand on airports.	**Community Services and Infrastructure** › Work with local government authorities and health and emergency service organizations to plan for anticipated changes in population and service demand from the Project. Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
	Land Use and Recreation › Changes in outdoor recreation use; and › Changes to number and area (ha) of Provincial Parks, ANSI, and Conservation Reserves affected.	**Land Use and Recreation** › Work with government authorities, local communities and business owners to develop local and regional strategy that addresses changes to outdoor recreation use. Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.
	Community Safety › Changes in crime rates; › Changes in rates of domestic violence, sexual and physical assault; and › Changes in levels of substance use (e.g., drugs, alcohol).	**Community Safety** › Engagement with local communities, government entities and local organizations to implement better access to health and addiction services, and the improvement of relationships between justice sector professionals (local police and Indigenous Peoples) to strengthen community-based policing in local communities. Mitigation will be identified as part of the EA/IA based on feedback from consultation and engagement activities with Indigenous communities.
Air Quality		
Construction	› Changes to local air quality during the construction phase due to fugitive dust from land clearing, material handling, and vehicles travelling on gravel roads and other exposed surfaces, and due to tailpipe emissions (e.g., NOx and CO) from the movement and operation of construction equipment and vehicles.	› During construction activities: engine idling policy; use of efficient, lower emission vehicles and equipment where practical; limit vehicle speeds; and maintain construction equipment in proper working condition according to manufacturer's specifications; and › Wet or cover storage piles and exposed surfaces to reduce fugitive dust emissions and wet road surfaces during dry periods. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices, for air quality, dust control and blasting during construction activities.
Operations	› Changes to local air quality during the operations phase due to vehicular traffic, and equipment and vehicles used for operation and maintenance activities. Vehicular exhaust emissions will consist primarily of NOx, CO, SO_2, suspended particulates, and volatile organic compounds, as well as GHG gases.	› During operation and maintenance activities: engine idling policy; use of efficient, lower emission vehicles and equipment where practical; limit vehicle speeds; and maintain construction equipment in proper working condition according to manufacturer's specifications; and › Wet or cover storage piles and exposed surfaces to reduce fugitive dust emissions and wet road surfaces during dry periods. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices, for air quality, dust control and blasting during operation and maintenance activities.
Greenhouse Gases		
Construction	› Increase in GHG emissions as result of construction activities and land use changes.	› Minimize the project footprint, especially in peatlands, through route alternative evaluation and design/construction techniques; › Utilize Best Management Practices for construction equipment, which may include: - Minimization of idling time by shutting equipment off when not in use; - Reducing idling times; - Maintaining equipment in proper working condition according to manufacturer's specifications; and - Use of speed limits. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for air quality.
Operations	› Increase in GHG emissions as result of operation and maintenance activities and land use changes.	› Minimize the project footprint, especially in peatlands, through route alternative evaluation and design/construction techniques; › Utilize Best Management Practices for maintenance equipment, which may include: - Minimization of idling time by shutting equipment off when not in use; - Reducing idling times; - Maintaining equipment in proper working condition according to manufacturer's specifications; and - Use of speed limits. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for air quality.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
Noise		
Construction	› Increase in ambient noise levels and ground vibration due to construction activities.	› Utilize Best Management Practices, which may include: use of newer and quieter construction equipment; avoid co-occurrence of construction activities with significant noise impact; ensure stationary sources (e.g., diesel generators) are enclosed and equipped with acoustic treatment on exhaust and intake; and avoid activities with significant noise impact during nighttime hours; › Develop a noise complaint assessment procedure during construction; › Develop a protocol for community notification of activities with significant noise impact (e.g., blasting) during construction and maintenance activities; and › Implement permanent noise mitigation features such as earth berms to eliminate the direct line of sight between the source (road) and receptor areas for locations where noise impact is determined to be significant, if applicable. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for noise during construction.
Operations	› Increase in ambient noise levels and ground vibration due to operation and maintenance activities.	› Implement permanent operational mitigation measures such as reduced speed limit along the segments of the road where noise impact is determined to be significant; and › Implement permanent noise mitigation features such as earth berms to eliminate the direct line of sight between the source (road) and receptor areas for locations where noise impact is determined to be significant, if applicable. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for noise during operations.
Groundwater		
Construction	› Vegetation clearing, site grading and stockpiling along the road corridor and temporary/permanent access roads, and at the construction camps, laydown areas and aggregate sites, may affect groundwater quantity, quality, and flow; › The hardening of the ground surface as a result of the construction of the roads and supportive infrastructure including construction camps and laydown/storage yards, has the potential of reducing groundwater recharge rates, lowering groundwater levels, and changing natural groundwater flow patterns; › Short-term dewatering during the construction of the foundations of the roads and structures (including bridges and culverts), the production of aggregates at the pits and quarries, and the water taking/pumping of groundwater from water supply wells at the construction camps can cause temporary decrease in groundwater tables and reduction of baseflow contributions to nearby groundwater dependent features (i.e., wetlands, streams, springs, and water supply wells, if any), especially within the dewatering zone of influence; and › Groundwater quality has the potential to be affected accidental releases during construction.	› Minimize the project footprint and barrier effects, especially in wetlands/peatlands, through route alternative evaluation and design/construction techniques; › Avoid using potential acid generating rocks and soils as road construction materials; and › Dewatering activities should, at a minimum, follow the Ontario Provincial Standard Specification (OPSS) 517 – Dewatering of Pipeline, Utility, and Associated Structure Excavation and OPSS 518 Construction Specification for Control of Water from Dewatering Operations. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard/best management practices in the industry, for erosion and sediment control, dewatering, spill prevention and response, waste disposal and site restoration.
Operations	› The operation of the pits and quarries and the associated aggregate production and dewatering may affect groundwater quantity, quality, and flow; › The continuing use of the roads may further reduce the groundwater infiltration rate and thus the groundwater recharge; and › The use of de-icing substances and accidental releases from machines and vehicles may affect local groundwater quality.	› Establish and maintain setbacks around waterbodies as needed; › Maintain minimum flows in watercourses downstream of the isolated work areas and implement erosion and sediment controls for drainage and structural maintenance/repair works; › Develop water quantity and quality monitoring plans, as needed to monitor the stream flow and water quality during the in-water works; and › Minimize the use of de-icing substances. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard/best management practices in the industry, for erosion and sediment control, dewatering, spill prevention and response, waste disposal and site restoration.
Surface Water		
Construction	› Changes in water quantity and distribution due to changes in land cover type (e.g., peatlands to gravel surface), may increase or decrease runoff, thereby affecting downstream flows, water levels and erosion-sedimentation processes; › Changes in water quantity and distribution due to the installation of temporary and permanent structures which may convey or obstruct flow (e.g., barrier effects), also affecting downstream flows, water levels and erosion-sedimentation processes; › Changes in water quality due to construction activities which expose soil, increase rates of erosion and sedimentation;	› Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to surface water; › Establish setbacks around waterbodies as needed; › Minimize disturbed areas where practical; › Maintain minimum flows in watercourses via pumping or flumes and maintain flows downstream of isolations; › Implement erosion and sediment controls for drainage and structural repair/maintenance work; › If water withdrawal is necessary for the construction limit the drawdown rates such that impacts are avoided or reduced; and › Develop water quality and quantity monitoring plans, as needed to monitor for flow and sediment events during in-water works.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
	› Changes in water quality due to accidental releases of contaminant substances from vehicles or other machinery used during construction; and › Discharge from dewatering can potentially cause erosion and mobilization of sediment and thus reduction of the water quality of receiving waterbodies at the discharge point and along the downstream flow path, with elevated total suspended solids (TSS) or turbidity.	Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices, for spill prevention and response, erosion and sediment control, surface water and stormwater, dewatering, and site restoration.
Operations	› Changes in water quantity and distribution due to changes in land cover type (e.g., peatlands to gravel surface), may increase or decrease runoff, thereby affecting downstream flows, water levels and erosion-sedimentation processes; › Changes in water quantity and distribution due to the installation of permanent structures which may convey or obstruct flow (e.g., barrier effects), also affecting downstream flows, water levels and erosion-sedimentation processes; › Changes in water quality due to maintenance activities which expose soil, increase rates of erosion and sedimentation; and › Changes in water quality due to accidental releases of contaminant substances from vehicles or other machinery used during operation and or maintenance (e.g., road salt/de-icing).	› Establish setbacks around waterbodies as needed; › Minimize disturbed areas where practical; › Maintain minimum flows in watercourses via pumping or flumes and maintain flows downstream of isolations; › Implement erosion and sediment controls for drainage and structural repair/maintenance work; › If water withdrawal is necessary for the construction limit the drawdown rates such that impacts are avoided or reduced; and › Develop water quality and quantity monitoring plans, as needed to monitor for flow and sediment events during in-water works. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for spill prevention and response, erosion and sediment control, surface water and stormwater, dewatering, and site restoration.
Geology, Terran and Soils		
Construction	› Changes to terrain (topography and surficial geology) due to site clearing, re-contouring, cut and fill requirements, aggregate extraction, overburden removal and other activities; › Changes to the potential development of known mineral deposits in the area; › Changes in soil quality due to compaction, rutting, admixing, , and acid mine drainage or metal leaching during the construction phase; › Changes in soil quality due to accidental releases of chemical or other hazardous materials during construction; and › Changes in soil quality and quantity due to increased rates of erosion and sedimentation processes caused by soil exposure and stockpiling during the construction phase.	› Limit the footprint temporary infrastructure, including vehicle and heavy equipment access routes; › Salvage onsite mineral topsoil, organic topsoil, woody debris, and subsoil for reclamation activities. Mineral topsoil, organic topsoil, woody debris, and subsoil should be stored separately, where practical; › Implement the erosion and sediment control plan including short-term erosion control measures for soil stockpiles to conserve soil and avoid or reduce soil losses, and reduce sedimentation transport into nearby sensitive areas; › Control and remove invasive species on disturbed areas and on soil stockpiles; › Disturbed slopes should be contoured to angles that are safe and stable, compatible with adjacent landforms, and compatible with restoration goals; › Strip topsoil and subsoil prior to construction, construct under frozen conditions, or use matting to reduce compaction, rutting and admixing; › Develop protocol for equipment to arrive to site clean and free of debris; and › Implement an acid rock drainage and metal leaching management plan to manage potentially acid generating rock and stockpiled material. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for spill prevention and response, erosion and sediment control, weeds and invasive species, blasting, and site restoration.
Operations	› Changes to terrain (topography and surficial geology) due to site clearing, re-contouring, cut and fill requirements, aggregate extraction, overburden removal and other activities; › Changes to the potential development of known mineral deposits in the area; › Changes in soil quality due to compaction, rutting, admixing, and spills of contaminating substances, and acid mine drainage or metal leaching during the construction and operations phases; and › Changes in soil quality due to accidental releases of chemical or other hazardous materials during the operations phase. .	› Limit the footprint temporary infrastructure, including vehicle and heavy equipment access routes; › Manage onsite mineral topsoil, organic topsoil, woody debris, and subsoil for reclamation activities. Mineral topsoil, organic topsoil, woody debris, and subsoil should be stored separately, where practical; › Implement the erosion and sediment control plan including operational erosion control measures for road surfaces and soil stockpiles to conserve soil and avoid or reduce soil losses, and reduce sedimentation transport into nearby sensitive areas; › Control and remove invasive species on disturbed areas and on soil stockpiles; and › Implement an acid rock drainage and metal leaching management plan to manage potentially acid generating rock and stockpiled material. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices spill prevention and response, erosion and sediment control, weeds and invasive species, blasting, and site restoration.
Visual Environment		
Construction	› Alteration of the existing undisturbed landscape and visual character during the construction a phase; and › Degradation of valued natural, cultural and Indigenous visual resources including sensitive sites and viewpoints.	› Retain buffers around sensitive receptors if needed; and › Route the roadway to avoid sensitive receptors. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for site restoration.
Operations	› Alteration of the existing undisturbed landscape and visual character during the operations phases; and › Degradation of valued natural, cultural and Indigenous visual resources including sensitive sites and viewpoints.	› Retain buffers around sensitive receptors if needed; and › Route the roadway to avoid sensitive receptors. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for site restoration.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
Wildlife and Wildlife Habitat		
Construction	› Habitat loss directly through vegetation clearing required for road construction, laydown areas, stockpiles, and excavations; › Habitat degradation caused by alterations in hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), reductions in habitat connectivity, loss of travel corridors, and habitat fragmentation/habitat avoidance. This in turn may lead to changes in survival and reproductive success; › Death of wildlife or reduction in habitat quality as a result of accidental releases of contaminants; › Sensory disturbance related to proximity (noise and visual) impacts from construction equipment, which can affect habitat suitability and use is especially possible in species that are sensitive; › Loss of wildlife and/or traditional use of wildlife, as a result of construction or vehicle collision; and › Attraction of wildlife to construction camps or the road corridor (e.g., food waste, ease-of-use) which can affect predator-prey relationships and thus wildlife survival and reproduction.	› Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to sensitive habitats, where feasible; › Avoid clearing vegetation during the roosting season to reduce impacts to bats; › Minimize vegetation/habitat clearing as much as practical; › Limit temporary infrastructure, including vehicle and heavy equipment access routes; › Conduct reptile and amphibian rescues where habitat has been identified; › Regrade and revegetate temporarily cleared areas; › Install signage in areas where frequent wildlife crossings of the roadway are expected; › Reduce speed limits in areas where wildlife interactions are expected; › Manage vegetation along ditches to ensure good visibility for wildlife; › Establish setbacks around sensitive and/or protected species and habitat features; › Consider the installation of wildlife crossing structures to facilitate movement of wildlife over the roadway in areas of high wildlife concentrations. These would include different wildlife crossing structures for different wildlife taxa (e.g., amphibians, reptiles, mammals); › Develop a protocol to manage attractant waste; › Locate laydown and refueling areas away from waterbodies; › Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution; › Manage noise control using standard best management practices; › Develop a protocol for beaver management to reduce the impacts of impoundment; and › Acquire permits as required from provincial and federal regulators. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for wildlife, vegetation, noise and light, spill prevention and response, waste management, traffic, and site restoration.
Operations	› Death of wildlife or reduction in habitat quality as a result of accidental releases of contaminants; › Sensory disturbance related to proximity (noise and visual) impacts from maintenance equipment, lighted areas, and roadway traffic, which can affect habitat suitability and use is especially possible in species that are noise and/or light sensitive; › Loss of wildlife and/or traditional use of wildlife, as a result of vehicle collision; › Attraction of wildlife to the road corridor (e.g., food waste, ease-of-use) which can affect predator-prey relationships and thus wildlife survival and reproduction; › Increased beaver activity and impoundment along the roadway in ponded or culvert areas; and › Increased harvest of wildlife by humans for recreational or traditional use due to increased public access.	› Minimize vegetation/habitat clearing as much as practical; › Install signage in areas where frequent wildlife crossings of the roadway are expected; › Reduce speed limits in areas where wildlife interactions are expected or are frequently observed; › Manage vegetation along ditches to ensure good visibility for wildlife during appropriate seasons; › Establish setbacks around sensitive and/or protected species and habitat features; › Consider the installation of wildlife crossing structures to facilitate movement of wildlife over the roadway in areas of high wildlife concentrations. These would include different wildlife crossing structures for different wildlife taxa (e.g., amphibians, reptiles, mammals); › Develop a protocol to manage attractant waste; › Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution; › Manage noise control using standard best management practices; › Develop a protocol for beaver management to reduce the impacts of impoundment; › Implement hunting and access restrictions, such as establishing traffic controls and barriers to access/secondary roadways; and › Acquire permits as required from provincial and federal regulators. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices, for wildlife, vegetation, noise and light, spill prevention and response, waste management, traffic, and site restoration.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
Birds and Bird Habitat		
Construction	› Habitat loss directly through vegetation clearing required for road construction, laydown areas, stockpiles, and excavations; › Habitat degradation caused by alterations in hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), habitat connectivity, and habitat fragmentation. This in turn may lead to changes in survival and reproductive success; › Death of birds or reduction in habitat quality as a result of accidental releases of contaminants; › Sensory disturbance related to proximity (noise) impacts from construction equipment, which can affect habitat suitability and use. More sensitive bird species may avoid areas with high noise temporarily or permanently; › Death of birds and/or eggs, including SAR and/or traditional use birds, as a result of construction (vegetation clearing) or vehicle collision; and › Attraction of bird species to construction camps or the road corridor (e.g., food waste, light causing insect attraction) which can affect predator-prey relationships and thus bird survival and reproduction.	› Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to sensitive habitats, where feasible; › Avoid clearing of vegetation and other nesting habitat during the migratory bird nesting season; › Conduct nest sweeps (with appropriate permitting) if clearing during the nesting season; › Install signage in areas where frequent bird crossings (e.g., grouse) of the roadway are expected; › Regrade and revegetate temporarily cleared areas; › Limit temporary infrastructure, including vehicle and heavy equipment access routes; › Develop a protocol to manage attractant waste; › Establish setbacks around sensitive and/or protected species and habitat features (such as nests); › Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution. › Manage noise using standard best management practices; and › Acquire permits as required from provincial and federal regulators if disturbance is required. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for wildlife, vegetation, spill prevention and response, waste management, and site restoration.
Operations	› Death of birds or reduction in habitat quality as a result of accidental releases of contaminants; › Sensory disturbance related to proximity (noise and light) impacts from maintenance equipment, roadway traffic, and lighted areas, which can affect habitat suitability and use. More sensitive bird species may avoid areas with high noise temporarily or permanently; › Death of birds and/or eggs, including SAR and/or traditional use birds, as a result of maintenance (vegetation clearing) or vehicle collision; › Attraction of bird species to the road corridor (e.g., food waste, light causing insect attraction) which can affect predator-prey relationships and thus bird survival and reproduction; and › Increased harvest of wildlife, including SAR by humans for recreational or traditional use due to increased public access.	› Avoid clearing of vegetation and other nesting habitat during the migratory bird nesting season; Conduct nest sweeps (with appropriate permitting) if clearing during the nesting season; › Install signage in areas where frequent bird crossings (e.g., grouse) of the roadway are expected; › Develop a protocol to manage attractant waste; › Establish setbacks around sensitive and/or protected species and habitat features (such as nests); › Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution; › Manage noise using standard best management practices; Implement hunting and access restrictions, such as establishing traffic controls and barriers to access/secondary roadways; and › Acquire permits as required from provincial and federal regulators. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for wildlife, vegetation, spill prevention and response, waste management, and site restoration.
Plants and Vegetation Communities		
Construction	› Loss of plants or plant communities, including potential SAR and traditional use plants as a result of vegetation clearing for construction, stockpiling, excavation, and/or laydown areas; › Loss of vegetation could reduce carbon sequestration capacity of carbon sinks; › Changes to community species composition and diversity (increases or decreases in certain species with a community), due to construction, changes in local hydrology or water quality, dust and air emissions, changes to soil quality, and accidental releases of contaminants; › Reduction in wetland habitat (including peatlands) or wetland quality/function due to construction, changes in local hydrology or water quality, dust and air emissions, changes to soil quality, and accidental releases; › Reduction in esker landforms and esker vegetation community habitat; › Introduction or proliferation of invasive plant species through construction, which may reduce the competitiveness of local plant species; and › Reduced soil quantity during earthworks may affect revegetation and restoration success.	› Minimize vegetation/habitat clearing as much as practical, especially in wetlands and riparian zones; › Limit temporary infrastructure, including vehicle and heavy equipment access routes; › Revegetate disturbed areas with native and/or non-invasive vegetation; › Designate locations for temporary stockpiling of vegetation and soils; › Provide information to construction workers and contractors on rare and sensitive habitat to be protected from disturbance located within and surrounding the site; › Establish setbacks around sensitive and/or protected species and habitat features; › Develop protocol for equipment to arrive to site clean and free of debris; › Complete pre-construction surveys for vegetation management (pre-clearing plant surveys, delineation of invasive or noxious vegetation, and no-go zones for clearing); › Consider routing that avoids or minimizes construction through wetlands/peatlands; › Design/road construction techniques to prevent barrier effects from road construction through peatlands; › Acquire permits as required from provincial and federal regulators; and › Develop a Wetland Compensation Plan for unavoidable impacts to these environments.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
		Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for vegetation, weed and invasive species, soils, erosion and sediment control, spill prevention and response, and site restoration.
Operations	› Changes to community species composition and diversity (increases or decreases in certain species with a community), due to operation and maintenance, changes in local hydrology or water quality, dust and air emissions, changes to soil quality, and accidental releases of contaminants; › Reduction in wetland habitat (including peatlands) or wetland quality/function due to operation and maintenance, changes in local hydrology or water quality, dust and air emissions, changes to soil quality, and accidental releases; › Reduction in esker landforms and esker vegetation community habitat; › Increased harvest of plants for recreational or traditional use due to increased public access; › Introduction or proliferation of invasive plant species through increased access to the public, which may reduce the competitiveness of local plant species; and › Reduced soil quantity during earth moving activities may affect revegetation and restoration success.	› Minimize vegetation/habitat clearing as much as practical; › Establish setbacks around sensitive and/or protected species and habitat features; › Develop protocol for equipment to arrive to site clean and free of debris; and › Acquire permits as required from provincial and federal regulators. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for vegetation, weed and invasive species, soils, erosion and sediment control, spill prevention and response, and site restoration.
Species at Risk		
Construction	› Habitat loss directly through vegetation clearing required for road construction, laydown areas, stockpiles, and excavations; › A loss or a reduction of available landscape features that contribute to Boreal Caribou winter habitat at a range scale as a direct result of vegetation clearing on the esker; › Habitat degradation caused by alterations in hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), reductions in habitat connectivity, loss of travel corridors, loss of migration routes, disruption to breeding and calving grounds, and habitat fragmentation/habitat avoidance. This in turn may lead to changes in survival and reproductive success; › Death of wildlife or reduction in habitat quality as a result of accidental releases of contaminants; › Sensory disturbance related to proximity (noise and visual) impacts from maintenance equipment, traffic, and lighted areas, which can affect habitat suitability and use is especially possible in species that are light and/or noise sensitive; › Loss of SAR as a result of construction or vehicle collision; and › Attraction of wildlife to construction camps or the road corridor (e.g., food waste, ease-of-use) which can affect predator-prey relationships and thus wildlife survival and reproduction.	› Identify alternate locations/routes for both roadway and ancillary infrastructure to reduce overall impacts to sensitive habitats, where feasible; › Develop SAR monitoring plans, as needed; › Develop offsetting or compensation plans to address residual effects to SAR and their habitat; › Minimize vegetation / habitat clearing as much as practical; › Limit temporary infrastructure, including vehicle and heavy equipment access routes; › Regrade and revegetate temporarily cleared areas; › Manage vegetation management plans along ditches to ensure good visibility for SAR; › Avoid engaging in disruptive activities (clearing, construction) during key sensitive wildlife periods and locations where SAR mammals (such as Wolverines and Caribou) may be present; › Avoid clearing of vegetation including bird nesting habitat during the migratory bird nesting season; › Avoid clearing vegetation which may act as habitat for breeding and roosting bats; › Reduce speed limits where wildlife interactions are expected; › Prohibit the feeding of wildlife; › Procedures to conduct reptile and amphibian rescues where needed; › Install perimeter fencing to deter access by large wildlife where necessary; › Instruct workers on wildlife awareness; › Report wildlife observations and wildlife roadkills; › Establish setbacks around sensitive and/or protected species and habitat features; › Install signage in areas where frequent wildlife crossing of the roadway are expected; › Consider the installation of wildlife crossing structures to facilitate movement of SAR over the roadway in areas of high wildlife concentrations; These would include different wildlife crossing structures for different wildlife taxa (e.g., mammals); › Develop protocol to manage attractant waste; › Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution; › Manage noise using standard best management practices; and › Acquire permits as required from provincial and federal regulators. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for wildlife, vegetation, noise, spill prevention and response, waste management, traffic, and site restoration.

Project Phase	Potential Effect	Preliminary Proposed Mitigation Measures
Operations	› Habitat degradation caused by alterations in hydrology patterns, erosion, dust and air emissions, vegetation changes (including introduction of invasive species which may displace natural vegetation), reductions in habitat connectivity, loss of travel corridors, loss of migration routes, disruption to breeding and calving grounds, and habitat fragmentation/habitat avoidance. This in turn may lead to changes in survival and reproductive success; › Death of wildlife or reduction in habitat quality as a result of accidental releases of contaminants; › Sensory disturbance related to proximity (noise and visual) impacts from maintenance equipment and roadway traffic, which can affect habitat suitability and use is especially possible in species that are noise sensitive; › Loss of SAR as a result of construction or vehicle collision; › Attraction of wildlife to the road corridor (e.g., food waste, ease-of-use) which can affect predator-prey relationships and thus wildlife survival and reproduction; and › Increased harvest of wildlife, including SAR by humans for recreational or traditional use due to increased public access.	› Develop SAR monitoring plans, as needed; › Minimize vegetation / habitat clearing as much as practical; › Manage vegetation management plans along ditches to ensure good visibility for SAR; › Avoid engaging in disruptive maintenance activities during key sensitive wildlife periods and locations where SAR mammals (such as Wolverines and Caribou) may be present; › Avoid clearing of vegetation including bird nesting habitat during the migratory bird nesting season; › Avoid clearing vegetation which may act as habitat for breeding and roosting bats; › Reduce speed limits where wildlife interactions are expected; › Establish setbacks around sensitive and/or protected species and habitat features; › Install signage in areas where frequent wildlife crossing of the roadway are expected; › Consider the installation of wildlife crossing structures to facilitate movement of SAR over the roadway in areas of high wildlife concentrations; These would include different wildlife crossing structures for different wildlife taxa (e.g., mammals); Develop protocol to manage attractant waste; › Use shaded and/or directed lights and energy efficient bulbs that are only as bright as necessary, where feasible and safe to do so to minimize light pollution; › Manage noise using standard best management practices; and › Acquire permits as required from provincial and federal regulators. Additional mitigation measures will be included in Management Plans that will be developed for the Project (see Initial Project Description Table 25-1). Management Plans will be developed based on standard best practices for wildlife, vegetation, noise, spill prevention and response, waste management, traffic, and site restoration.

*Some aspects related to human health are included under the socio-economic environment and Aboriginal and Treaty Rights and Interests disciplines.

References:

Fisheries and Oceans Canada (DFO). 2000. Interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater. Available: https://www.dfo-mpo.gc.ca/pnw-ppe/codes/screen-ecran-eng.html

Fisheries and Oceans Canada (DFO). 2013. Ontario Restricted Activity Timing Windows for the Protection of Fish and Fish Habitat. URL: https://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/on-eng.html Accessed May 2022.

Government of Canada (GoC). 2019b. Measures to protect fish and fish habitat. Available: https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html

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