WSR
WEBEQUIE
SUPPLY ROAD

WEBEQUIE SUPPLY ROAD ENVIRONMENTAL ASSESSMENT REPORT / IMPACT STATEMENT EXECUTIVE SUMMARY

January 30, 2026

AtkinsRéalis Ref: 661910

WEBEQUIE FIRST NATION

AtkinsRéalis

Contents

Contents (Cont'd)

Contents (Cont'd)

Contents (Cont'd)

Contents (Cont'd)

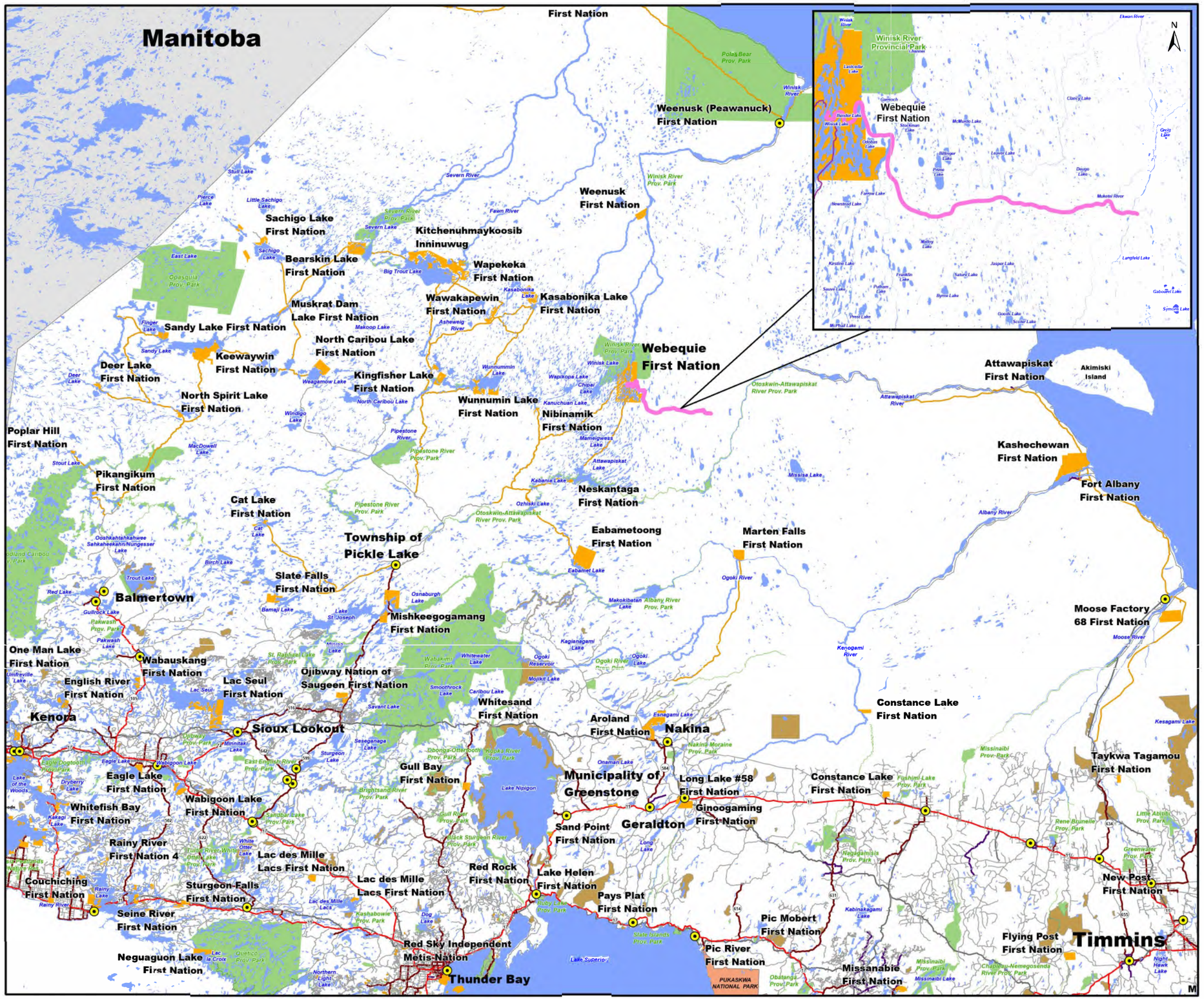
Contents (Cont'd)

In-Text Figures

ES 1.0 Introduction

Webequie First Nation is completing an Environmental Assessment (EA) under Ontario's *Environmental Assessment Act* (EA Act) and an Impact Assessment (IA) under Canada's *Impact Assessment Act* (IA Act) for the proposed Webequie Supply Road Project ("the Project" or WSR).

Webequie is a remote First Nation community located in northern Ontario, situated on the northern peninsula of Eastwood Island on Winisk Lake, approximately 525 kilometres north of the City of Thunder Bay, with a population of 976 (CIRNAC, 2023) of which 821 are registered as on-reserve residents. As a fly-in community, Webequie is primarily accessible by air, without year-round road access. During the winter, a seasonal winter road is used to connect Webequie to other parts of northern Ontario.



Legend

- Preliminary Recommended Preferred Route
- First Nation Reserve
- Waterbody
- Provincial Park
- Conservation Reserve
- Federal National Park
- Rail
- Arterial Road
- Collector Road
- Expressway / Highway
- Local, Resource, Recreation, and Service Road
- Winter Road
- Cities/Towns

0 75 150 Km

Webequie Supply Road
Project Location

Date: 06/03/2025

1. Coordinate System: NAD 1983 ©ntario MNR Lambert
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 ©ntario (LIO) Warehouse Open Data (https://geohub.lio.gov.on.ca/), ©ntario Ministry of Natural Resources and Forestry (©MNRF) Download Date: 2021-02-04

SIZE: 11 X 17

The proposed WSR will be a new 35-metre-wide right-of-way to accommodate a two-lane all-season road that is approximately 107 kilometres long, connecting Webequie and its airport to existing mineral exploration and proposed future mining development near McFaulds Lake, within an area referred to as the Ring of Fire.

An ***environmental assessment*** is a process used to evaluate the potential effects of a proposed project or action on the environment. The Ontario EA Act considers the natural, social, economic, cultural and built environment. The goal is to identify both positive and negative effects and find ways to either reduce or avoid negative effects or enhance positive effects. An ***impact assessment***, on the other hand, is more detailed and comprehensive in scope. It not only considers environmental impacts but also examines in greater detail social, economic, health effects, including impacts to Indigenous peoples and climate considerations (Canada IA Act).

This Executive Summary presents an abbreviated version of the WSR Draft Environmental Assessment Report / Impact Statement (EAR/IS) prepared by AtkinsRéalis (the Project Team) with the assistance of other professional consulting firms. The Draft EAR/IS is being submitted by Webequie First Nation, as the proponent, to the Impact Assessment Agency of Canada ("IAAC" or "the Agency") pursuant to requirements under the federal IA Act and Tailored Impact Statement Guidelines (TISG) approved for the Project on February 24, 2020. The Draft EAR/IS is being released to Indigenous communities, the public, government agencies, and stakeholders by the proponent for review and comment, pursuant to requirements under the Ontario EA Act and final Terms of Reference (ToR) approved by the Minister of Environment, Conservation and Parks (MECP) on October 8, 2021.

This Executive Summary is intended as a reference tool only, for fulsome information, please refer to the full Final EAR/IS.

ES 2.0 Project Overview

The proposed WSR is a new two-lane all-season road within a cleared right-of-way (ROW) of approximately 35 m in width and approximately 107 km in length. The preferred route for the road consists of a northwest-southeast segment running 51 km from the Webequie First Nation Reserve to a 56 km segment running east-west before terminating near the McFaulds Lake within the Ring of Fire region. A total of 17 km of the WSR is within Webequie First Nation Reserve lands, with the remainder of the road located on un-surveyed Ontario Crown lands.

The Project includes the following main components:

- Permanent two-lane all-season road with roadside ditches that is approximately 12-13 m wide within a typical 35 m ROW.
- Development of maintenance and rest areas along the WSR to allow equipment / vehicles to either safely pull over to rest or turn around during the operations phase of the Project.
- Construction, operations and maintenance of 31 waterbody crossings, including six (6) bridges and 25 culverts.
- Development of temporary supportive infrastructure associated with construction, including aggregate/rock source areas (pits/quarries), temporary access roads and construction camps with laydown and storage areas, including power supply and communication system.
- Development of a permanent Maintenance and Storage Facility (MSF), aggregate pit / quarry with access road, power supply and communications, and storage areas for fuels, explosives, equipment, aggregate and wastes to support operations and maintenance of the Project.

The Project is designed and will be constructed and operated according to design codes, standards and guidelines that are applicable to Ontario highway projects. The WSR is classified as a Rural Collector Undivided facility and design standards for the WSR are consistent with those used by the Ontario Ministry of Transportation (MTO) for similarly classified roads in the northeast and northwest regions of the province.

The Project is planned to occur in two main phases:

- **Construction Phase**: All the activities associated with the initial development of the road and supportive infrastructure from the start of construction to the start of operations and maintenance of the WSR. The construction phase is anticipated to take approximately 5 to 6 years to complete.
- **Operations Phase**: All activities associated with operations and maintenance of the road and other permanent supportive infrastructure (e.g., MSF, pits/quarries) that will start after construction and will continue for the life of the Project. The operations and maintenance phase of the Project is considered to be 75 years based on the expected timeframe when major refurbishment of the road components (e.g., bridges, culverts) is anticipated.

There are no proposed plans to decommission the WSR and the Project is proposed to be operated for an indeterminate time period; therefore, future decommissioning and eventual abandonment will not be considered in the EA/IA for the Project.

Based on the low population density in the area and the intended stated purpose of the WSR, an average annual daily traffic volume of less than 500 vehicles has been predicted during the road operations phase, comprised primarily of light to medium personal and commercial vehicles, with limited heavier truck traffic carrying industrial (mining) supplies and equipment. WSR traffic operations are not anticipated to include either mineral ore or mine product hauling / transport.

ES 3.0 Webequie First Nation – Our Story

Webequie First Nation is an Ojibway community located about 525 km north of the City of Thunder Bay in northwestern Ontario with a population of 976 (CIRNAC, 2023), of which 821 are registered as on-reserve. Webequie is a fly-in remote community with a seasonal winter road used for access during the months of January and February. The community is located on the northern peninsula of Eastwood Island on Winisk Lake in the upper reaches of the Winisk River.

Webequie First Nation's homeland makes up part of the traditional Oji-Cree territories in the central expanse of northern Ontario. The traditional language spoken in Webequie is Oji-Cree, a dialect of Anishinaabe with influences from the Cree language and is considered a distinct language and culture (CBC, 2023). Webequie is an Ojibway word with the meaning "shaking head from side to side". The community received the name many years ago and has a special meaning to its people. According to the community the origin is as follows:

> *"The story goes, that early one morning a long time ago, a community member was paddling his canoe out onto the lake. He noticed a family of mergansers attempting to take flight and running across the calm surface. It was a very calm day, and there was no wind to help them get airborne. In their frantic attempt to get some lift, the man observed they were shaking their heads from side to side, looking for a breeze. This is how our name originated, and why we have a merganser as part of our community logo"* (Webequie First Nation, 2023a).

Webequie First Nation is a member of Nishnawbe Aski Nation that represents First Nations in Treaty No. 9 and the Ontario portion of Treaty No. 5 (Nishnawbe Aski Nation, 2023). Treaty No. 9 was first signed in 1905-1906 and adhesions signed in 1929-1930. At the time, the Crown included clans representing the Webequie community with the Eabametoong (Fort Hope Band) (Archaeological Services Inc., 2021). In the post-Treaty years, Webequie First Nation was not recognized as having Band status until 1985 when this status was received from the federal government. Although Webequie was recognized as a settlement, it did not have reserve lands allocated officially, and having only a Band Registration number did not give Webequie reserve status, or the many associated benefits. Webequie continued to pursue reserve lands, which were finally granted in 2001 (Webequie First Nation, 2019).

Webequie First Nation asserts that it has the inherent right to self-governance and self-determination (Webequie First Nation, 2023b). The elected Chief and Councillors are the recognized political representatives and leadership of the community. Webequie is committed to preserving its freedom, to live their lives as they choose, and to be proud of its heritage, and the strong and thriving community that has been built (Webequie First Nation, 2023b).

Webequie First Nation has a Custom Electoral System, with one Chief, one Head Councillor and five Councillors elected every two years (CIRNAC, 2023). Custom election processes follow the community's election code that provides the rules under which chiefs and councillors are chosen for those First Nations who are not under the Indian Act election rules. These codes are often unique to the specific community (Indigenous Services Canada [ISC], 2023). Webequie has a rich history of close relations and family ties with neighbouring communities. The community is formally affiliated with political territorial organizations with common goals and interests. Webequie First Nation is affiliated with:

- Matawa First Nations;
- Nishnawbe Aski Nation;
- Chiefs of Ontario; and
- The Assembly of First Nations.

ES 3.1 Webequie Project Team and Elders' Guiding Principles

Webequie First Nation has established a Webequie Project Team (WPT) to guide and provide strategic advice and community perspectives to the consultant Project Team (led by AtkinsRéalis) conducting the EA/IA for the Project. The WPT consists of community members and elected councillors who report directly to the Chief and Council on the progress of the Project at key milestones and decision-making points in the EA/IA process. Guidance to the WPT is being provided by Webequie Elders.

This guidance ensures that the Webequie First Nation conducts consultation and engagement for the Project in a respectful manner that reflects the culture and traditions of the Webequie People and their clans. This includes following principles of mutual recognition of nation to nation, ancestral knowledge, traditional knowledge and practices, clan families and relationships, sustainable livelihood, and traditional protocols. Webequie First Nation has developed a three-tier framework for their approach to Indigenous consultation that builds on their traditional cultural values, customs, and beliefs. Webequie is taking a unique approach that is based not only on their Elders, but modern-day protocols in terms of how they engage with the public and fellow Anishinawbek, Cree, and Oji-Cree.

ES 3.2 Project Purpose and Rationale – Why We Need This Road

The primary purposes of the proposed Webequie Supply Road are to:

- Allow for the movement of materials, supplies, and people from the Webequie First Nation's Airport to mineral exploration and proposed future mine developments in the McFaulds Lake area;
- Provide employment and other economic development opportunities to Webequie First Nation community members and businesses that reside either in or around the community's reserve and traditional territory, while preserving their language and culture; and
- Provide experience / training opportunities for youth to help encourage the pursuit of additional skills through post-secondary education.

The mining sector plays an important role in Ontario's economy and contributes to regional communities. In 2025, the total market value of minerals produced in Ontario is estimated to reach $13.7 billion, $3.4 billion in wages and salaries, and sustain 51,872 full-time jobs in the Ontario economy via direct, indirect and induced channels (Ontario Mining Association, 2022). The mining industry is the largest private sector employer of Indigenous Peoples in Canada and in Ontario. Indigenous employment accounts for 11.2% of direct mining jobs. There are also many opportunities for Indigenous-owned and -operated businesses to secure contracts with mining companies that create economic development in their communities.

The mineral potential in and around McFaulds Lake within the Ring of Fire region has been well documented in many background reports and studies. Spanning approximately 5,000 km^2, the area is rich in chromite, nickel, copper, platinum group elements, gold, zinc, and other valuable minerals and is considered one of the most important mineral deposits in Canada, with the potential to positively impact the nation's economy and global mining industry.

The proposed WSR is also relevant in the context of broader, long-term provincial growth, development, and multimodal transportation initiatives in the region as well as provincial government plans that include policies and initiatives for an improved transportation system and community access in northern Ontario. From the perspective of the community, the WSR could be constructed and operated to provide a connection between Webequie First Nation and the McFaulds Lake area to serve mineral exploration and future mining development activities, with no connection to the provincial highway system.

ES 4.0 Legislative and Regulatory Framework

The following describes both provincial and federal regulatory approvals and authorizations required to construct and operate the Project:

Ontario Environmental Assessment Act

The Project is following a Comprehensive Environmental Assessment process that is followed for projects that are complex in nature, with the potential for significant environmental effects, and require a decision by the Ministry of the Environment Conservation and Parks under the EA Act.

Webequie entered into a voluntary agreement with MECP under Section 3.0.1 of the EA Act to make the Project subject to the Act, as the Comprehensive EA process was considered to be more appropriate for effectively addressing the scale, complexity and potential for significant environmental effects. The Ministry of Natural Resources (MNR) advised MECP and Webequie First Nation that assuming there are no deficiencies or gaps in the preparation of the Comprehensive EA, it should address MNR's Resource Stewardship and Facility Development (RSFD) Class EA requirements; therefore, it is Webequie's intent to satisfy the MNR RSFD Class EA requirements through the Comprehensive EA process with any potential, future project changes falling under the appropriate processes relating to the Comprehensive EA.

The first step in a Comprehensive EA is the preparation, submission, and MECP approval of a Terms of Reference (ToR). Webequie First Nation completed the process for the ToR approval, beginning with issuing a Notice of Commencement of the ToR and releasing a Draft ToR for review. Following engagement with stakeholders, government agencies, the public and Indigenous communities, including both virtual and in-person community open houses and meetings, Webequie First Nation finalized a Proposed ToR, considering comments received on the Draft ToR. The Proposed ToR was submitted to the MECP and identified a framework for the planning and decision-making process to be followed by Webequie First Nation during the preparation of the EA.

Following the review period of the Proposed ToR, MECP approved the ToR with amendments. The amendments in the ToR Notice of Approval contained additional requirements for the cumulative effects assessment as part of the EA. The Notice of Approval of the ToR for the Project indicated that the EA must be prepared in accordance with the approved ToR pursuant to the EA Act. In November 2021, the Notice of Commencement of the EA was issued to formally start the EA.

Project Timeline for the Provincial Comprehensive Environmental Assessment

The following timeline highlights major steps and milestones in the project's development from the formal commencement of the EA stage.

- **January 2019**: Issued Notice of Commencement of Terms of Reference (ToR).
- **September 2019**: Released Draft ToR for review.
- **August 2020**: Submitted Proposed ToR to the MECP.
- **October 8, 2021**: MECP approved the ToR with amendments.
- **November 3, 2021**: Issued Notice of Commencement of Environmental Assessment.
- **2025:** Completion and circulation of Draft EAR/IS for review
- **January 30, 2026:** Submission of Final EAR/IS for review and decision.

Canada Impact Assessment Act

The Project was subject to review under the federal *Canadian Environmental Assessment Act* and transitioned to the IA Act, enacted June 21, 2019, which requires proponents of projects that are described in the Act's *Regulations Designating Physical Activities* to prepare Initial and Detailed Project Descriptions. "Physical Activities" subject to the Act are defined to include "the construction, operation, decommissioning and abandonment of a new all-season public highway that requires a total of 75 km or more of new ROW". From the review of the Detailed Project Description, and the results of associated engagement and consultation activities, the IAAC issued a Notice of Decision to Webequie First Nation on December 2, 2019 that a federal IA is required for the Project based on the potential for adverse effects within federal jurisdiction, including fish and fish habitat, migratory birds, and changes to the health, social, economic and environmental conditions of Indigenous Peoples. In their decision, the Agency also noted that the Project may adversely impact the rights of several Indigenous groups, including First Nations who are signatories to Treaty 9.

Following the determination that a federal IA was required, the Agency as part of the planning phase of the IA process prepared the following planning documents for the Project: Tailored Impact Statement Guidelines (TISG), Indigenous Engagement and Partnership Plan, Public Participation Plan, Permitting Plan, and Cooperation Plan.

Key Milestones completed to date for the Federal Impact Assessment include the following:

- Initial and Detailed Project Descriptions: Required under the IA Act for projects involving significant physical activities. IAAC determined that a federal Impact Assessment is required.
- Engagement and Consultation: Conducted with stakeholders, First Nations, and the public.
- IA Planning Documents: Developed by IAAC, including TISG, Indigenous Engagement and Partnership Plan, Public Participation Plan, Permitting Plan, and Cooperation Plan.
- Impact Statement Phase: Baseline studies, effect assessment, engagement and consultation and preparation if Impact Statement (IS) technical report.
- Impact Assessment Phase: Begins once IAAC is satisfied with the IS content, followed by the preparation of a draft Impact Assessment Report (IAR).

The timeline below outlines the major steps and milestones in the federal IA process for the Project from submission of the Detailed Project Description under the IA Act.

Project Timeline for the Federal Impact Assessment

- **June 21, 2019:** Enactment of the Canada *Impact Assessment Act*.
- **December 2, 2019:** IAAC issued a Notice of Decision requiring a federal IA for the Project.
- **February 24, 2020:** IAAC posted a Notice of Commencement of the IA, concluding the planning phase and starting the Impact Statement (IS) phase.
- **August 9, 2022:** Webequie First Nation requested an extension to the three-year time limit for the IS phase.
- **January 5, 2023:** IAAC granted the extension to January 6, 2027.
- **October 26, 2023:** Government of Canada's Statement on the Interim Administration of the IA Act.
- **June 20, 2024:** Budget Implementation Act, 2024 brought amendments to the IA Act into force.
- **July 15, 2024:** IAAC notified Webequie First Nation of key amendments to the IA Act and confirmed the Project remains subject to the amended IA Act.
- **2025:** of Completion and circulation of Draft EAR/IS for review.
- **January 30, 2026:** Submission of Final EAR/IS for review and decision.

ES 4.1 Process for Federal-Provincial Coordination

A coordinated approach was adopted to meet the requirements of both, the federal and provincial assessment processes. In addition, the Webequie Three-Tier approach is being incorporated in the EA/IA process, as described in **Section ES 5.4.2** For the Project, the two levels of government have indicated a willingness to follow a coordinated assessment process to the extent possible, and for the proponent to produce one body of documentation, the EAR/IS. As such, the EAR/IS addresses the requirements of both the provincial ToR and the federal TISG. To help facilitate a coordinated process, an EA Coordination Team has been established for the Project and 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.

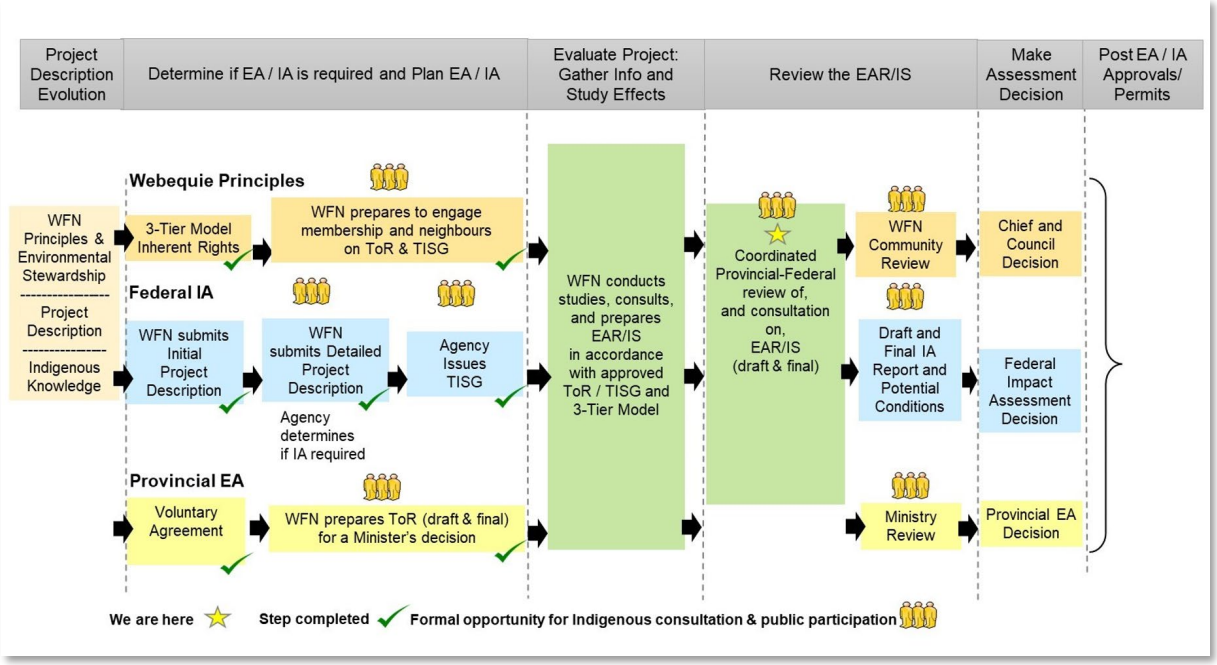
The EA Coordination Team is comprised of the following provincial and federal agencies:

- Ontario Ministry of Energy and Mines;
- Ontario Ministry of the Environment, Conservation and Parks;
- Ontario Ministry of Natural Resources;
- Ontario Ministry of Transportation; and
- Impact Assessment Agency of Canada.

As part of the coordinated federal-provincial EA/IA process, the Webequie Supply Road assessment includes the following process milestones**:**

- Pre-EA Planning, including signing of the voluntary agreement between Ontario and Webequie First Nation to participate in the process, development of the ToR and Agency issuance of the TISG;
- EA/IA commencement;
- Environmental baseline studies, consultation and preparation of the EAR/IS;
- EA and IA decisions; and
- Monitoring and follow-up.

ES Figure 4.1: Coordinated Federal-Provincial EA/IA Process



ES 5.0 Engagement and Consultation

Leading up to the release of the Draft EAR/IS Webequie conducted extensive engagement and consultation activities with Indigenous communities and groups, the public, government agencies, and stakeholders, focusing on the following topics:

- Identification and confirmation of Valued Components;
- Defining criteria and indicators for evaluation of alternatives and project effects assessment;
- Characterizing the baseline environment;
- Evaluating alternative routes, and locations for supportive infrastructure (e.g., aggregate source areas, construction camps), including identification of a preliminary recommended preferred route and supportive infrastructure, as the basis for the Project Footprint;
- Sharing and incorporating Indigenous Knowledge and Land and Resource Use (IKLRU) into the EA/IA, including assessment of impacts on Aboriginal Treaty and/or Rights and Interests (ATRI);
- Determining potential effects, including cumulative effects, and recommended mitigation measures; and
- Recommending follow-up monitoring and commitments.

Detailed descriptions of engagement and consultation activities during the EA/IA process specific to Indigenous communities and groups are provided in the Consultation Progress Reports Rounds 1, 2 and 3 and form part of the Record of Engagement and Consultation for the Project. Consultation Progress Reports were provided to MECP and to each Indigenous community that was engaged before proceeding to each subsequent EA/IA milestone. The Project Team also conducted Consultation Round 4 and targeted cumulative effects assessment consultation to provide opportunities for Indigenous communities to receive information and provide feedback on the cumulative effects assessment for the Project. A summary report of the consultation with Indigenous communities regarding the cumulative effects assessment is contained in the Record of Engagement and Consultation.

ES 5.1 Indigenous Engagement and Consultation

Fulfillment of Duty to Consult

It is the Crown's constitutional duty to determine whether a Duty to Consult has been triggered by a Project and, if so, identify the Indigenous communities to be engaged and the appropriate consultation to be undertaken with those communities. As the Project is subject to the provincial EA Act, and the federal IA Act, both federal and provincial ministries and agencies represent the Crown. The Ontario Crown can delegate some procedural aspects of the Duty to Consult to project proponents, who are obliged under the EA Act to consult with all interested parties, including Indigenous communities. To ensure engagement and consultation with Indigenous communities is meaningful, it is important to recognize that Indigenous communities have varying rights and interests in respect of the Project. Consequently, Indigenous communities may request different approaches to engagement and consultation, as well as accommodation, where appropriate, to mitigate impacts to their rights and interests. In addition, the "public" consultation process is also open to Indigenous communities.

The MECP and the Ministry of Energy, Northern Development and Mines (ENDM) (now Ministry of Energy and Mines [MEM]), on behalf of the Ontario government, have formally delegated some procedural aspects of required consultation to Webequie First Nation, as the proponent of the Project. While some Duty to Consult responsibilities have been delegated to the proponent, the Government of Ontario still retains overall responsibilities related to the constitutional Duty to Consult. A Memorandum of Understanding (MOU) between MECP, ENDM (now MEM) and Webequie First Nation, setting out how roles and responsibilities related to the Duty to Consult are shared between the Crown and the proponent was finalized on February 7, 2020. In general, Webequie First Nation is responsible for carrying out Statutory Consultation in respect of the Project in accordance with the EA Act and will consult with the Indigenous communities for that purpose; and the Crown may rely on Statutory Consultation in fulfilling its Duty to Consult.

The federal Crown have not delegated any, or any part, of its Duty to Consult with Indigenous Peoples. As part of the IA Planning Phase, the Agency prepared an *Indigenous Engagement and Partnership Plan* to guide the Proponent, which outlines opportunities and methods for meaningful Agency-led consultation with potentially affected and interested Indigenous groups throughout the impact assessment process.

ES 5.2 Identification of Participants

ES 5.2.1 Indigenous Communities and Groups

The Crown (MECP and IAAC) provided lists of First Nations and Métis whose exercise of Aboriginal and Treaty Rights may be adversely affected by the Project and/or that may have interest in the Project. The federal Crown's list of Indigenous communities and groups to be consulted for the Project is in the Agency *Indigenous Engagement and Partnership Plan* provided to the proponent on February 24, 2020. The Ontario Crown's preliminary list of Indigenous communities to be consulted for the Project was provided in a letter from MECP dated December 19, 2018 and confirmed in the MOU of February 7, 2020 between MECP, ENDM (now MEM) and Webequie First Nation. The collective list of the twenty-two (22) Indigenous communities that were consulted and engaged as part of the EA/IA process for Project are listed below. Communities marked with an asterisk are those where Aboriginal and Treaty Rights and Interests may be affected by the Project, as identified by the Crown. The table also identifies those First Nations that Webequie First Nation has identified that could potentially be most impacted by the Project, and thereby, planned a greater level of effort for engagement and dialogue. Communities marked with an asterisk are those whose Aboriginal and Treaty Rights may be affected by the Project, as identified by the Crown.

Indigenous Communities Consulted and Engaged

Indigenous Community	Identified by Webequie First Nation	Identified by MECP	Identified by IAAC	Tribal Council or Affiliation
Webequie First Nation	✓	✓*	✓*	Matawa Tribal Council
Aroland First Nation		✓*	✓*	
Ginoogaming First Nation		✓	✓	
Long Lake #58 First Nation		✓	✓	

Indigenous Community	Identified by Webequie First Nation	Identified by MECP	Identified by IAAC	Tribal Council or Affiliation
Marten Falls First Nation	✓	✓*	✓*	
Neskantaga First Nation	✓	✓*	✓*	
Nibinamik First Nation	✓	✓*	✓*	
Constance Lake First Nation		✓*	✓	
Eabametoong First Nation	✓	✓	✓*	
Kashechewan First Nation		✓*	✓	Mushkegowuk Council
Fort Albany First Nation		✓*	✓*	
Attawapiskat First Nation	✓	✓	✓*	
Kasabonika Lake First Nation	✓	✓*	✓*	Shibogama First Nations Council
Kingfisher Lake First Nation		✓*		
Wapekeka First Nation		✓*		
Wawakapewin First Nation		✓*		
Wunnumin Lake First Nation		✓*		
Kitchenuhmaykoosib Inninuwug First Nation		✓*	✓	Independent First Nation Alliance
Weenusk (Peawanuck) First Nation	✓	✓*	✓*	No Tribal Affiliation, deemed an independent First Nation
North Caribou Lake First Nation		✓		Windigo First Nations Council
Mishkeegogamang First Nation		✓		No Tribal Affiliation, deemed an independent First Nation
Métis Nation of Ontario – Region 2		✓		Métis Nation of Ontario

ES 5.2.2 Stakeholder Participants

In addition to the public, Webequie First Nation identified the following stakeholders:

- Local municipalities, towns or townships within the Project study area, including City of Thunder Bay, Municipality of Greenstone, Township of Pickle Lake, City of Timmins, and Municipality of Sioux Lookout;
- Elected representatives, federal government agencies, and Ontario ministries with an interest in the Project;
- Any member of the public with an expressed interest in the Project; and
- Any other stakeholders (e.g., local businesses, trappers, resource-based companies including Crown land tenure and claim holders in the McFaulds Lake area, non-government organizations, etc.) with a potential interest in the Project.

The Project contact list was updated throughout the EA/IA process as new stakeholders were identified, and when stakeholders either asked to be included on the list or asked to be removed from the list.

ES 5.2.3 Ontario Government Review Team and Federal Agencies

Following guidance from the MECP and IAAC and based on the Project components and potential Project related effects, the following provincial and federal ministries and agencies participated in the EA/IA at some level, including as members of the Ontario Government Review Team (GRT) and federal agencies:

Ontario Government Review Team

- Ministry of Energy and Mines;
- Ministry of the Environment, Conservation and Parks;
- Ministry of Natural Resources;
- Ministry of Transportation;
- Ministry of Indigenous Affairs and First Nations Economic Reconciliation;
- Ministry of Northern Economic Development and Growth;
- Ministry of Tourism, Culture and Gaming;
- Ministry of Economic Development, Job Creation and Trade; and
- Ontario Ministry of Citizenship and Multiculturalism.

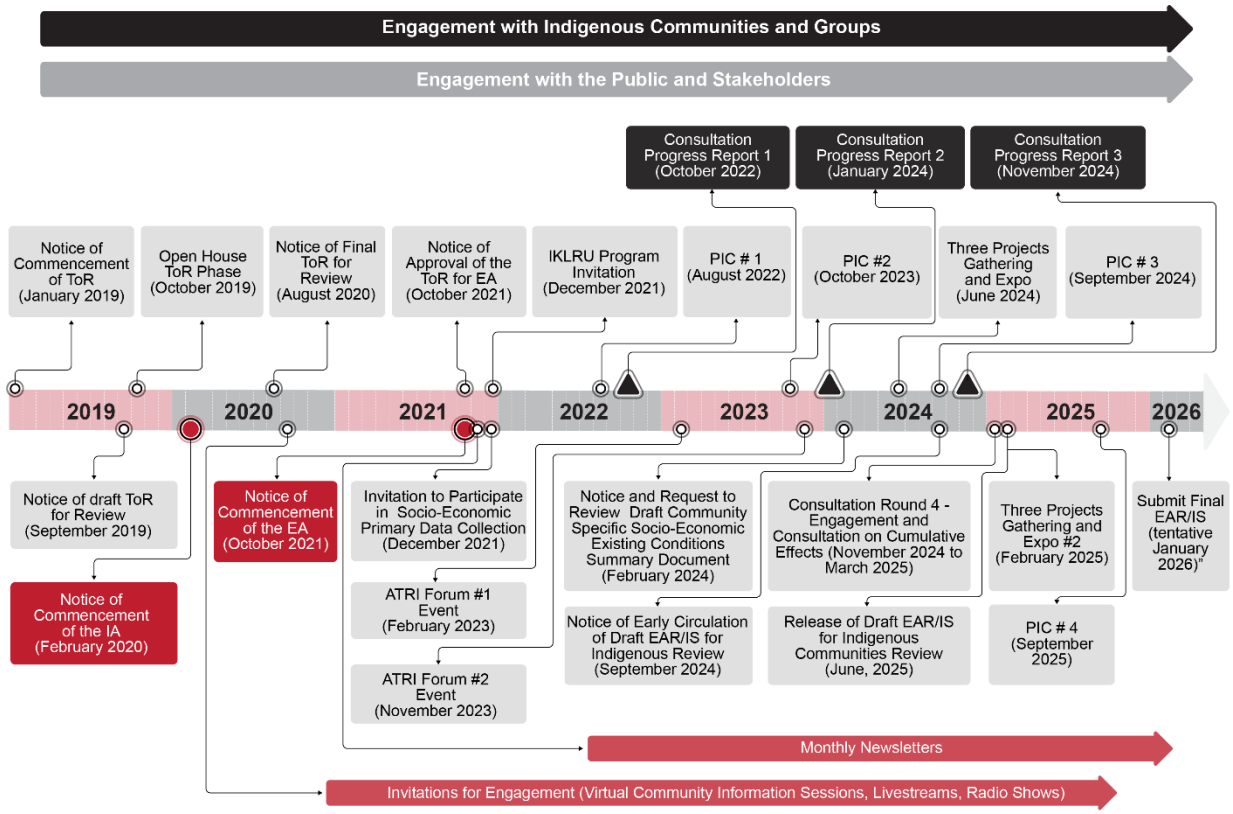
Government of Canada

- Impact Assessment Agency of Canada;
- Environment and Climate Change Canada;
- Fisheries and Oceans Canada;
- Crown-Indigenous Relations and Northern Affairs Canada;
- Indigenous Services Canada; and
- Transport Canada.

ES 5.3 EA/IA Engagement Milestones and Timelines

ES Figure 5.1 below shows a timeline of key EA/IA engagement milestones.

ES Figure 5.1: EA/IA Engagement Milestones



ES 5.4 Engagement and Consultation with Indigenous Communities and Groups

ES 5.4.1 Principles and Approach to Engagement and Consultation

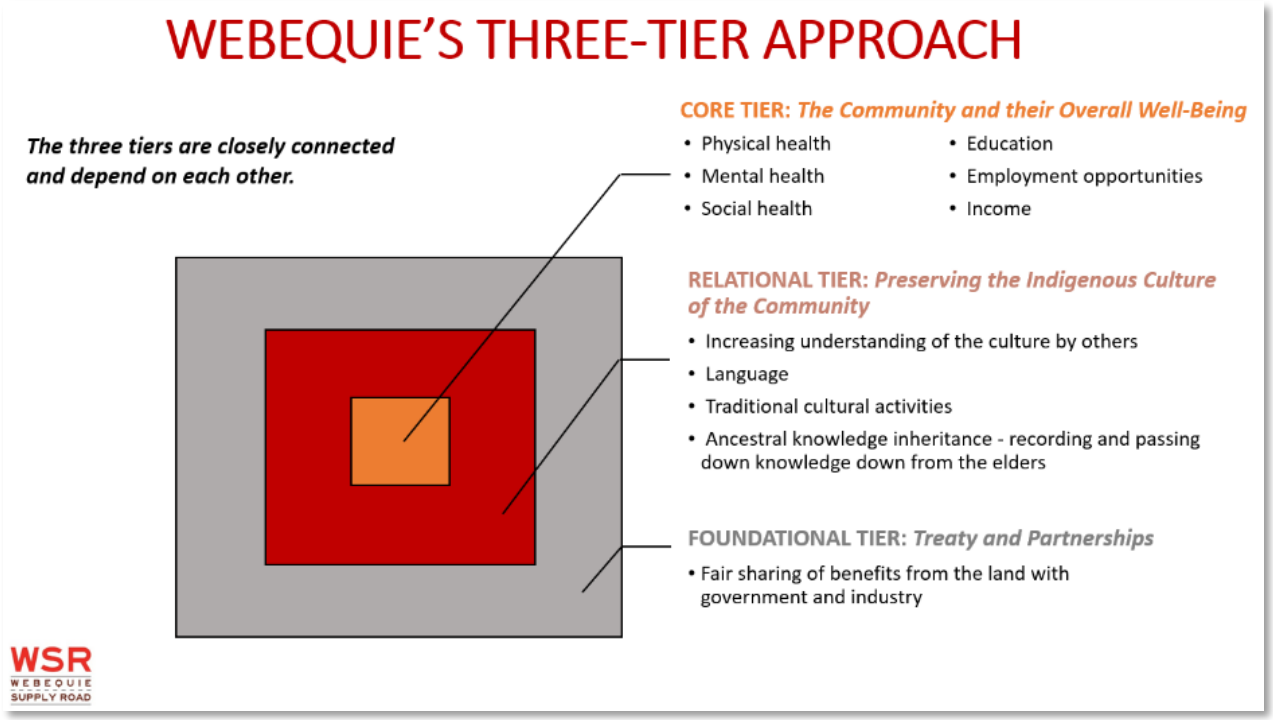
In addition to the requirements of applicable legislation, policies and guidelines, the engagement and consultation plan for Indigenous communities was developed and conducted in accordance with Webequie's Elders' guiding principles to ensure that consultation / engagement was conducted in a respectful manner that reflects the culture and traditions of the Webequie people and their clans. These principles include mutual recognition of nation to nation, ancestral knowledge, traditional knowledge and practices, clan families and relationships, sustainable livelihood, and traditional protocols. Consultation activities also included the key elements outlined in the Nishnawbe Aski Nation Handbook on Consultation in Natural Resource Development, 2007.

ES 5.4.2 Webequie First Nation Three-Tier Approach

Webequie First Nation has developed a Three-Tier framework for their approach to Indigenous consultation. This approach has been passed on through generations and is consistent with Webequie's traditional cultural values, customs, and beliefs. The framework includes:

- **Core Tier** – Webequie First Nation: project development and consultation is based on *Bimachiiowiin* (life sustaining or sustainable), *Ondatissiwiin* (source of life) and *Minobiimatissiwiin* (prosperity and good life agreements).
- **Relational Tier** – First Nations Neighbours and Government Agencies: Involves outreach to and involvement of other potentially affected First Nations, many of whom are home to Webequie family / clan members, and developing relationships with and working closely with agencies of the provincial and federal governments.
- **Foundational Tier** – Social and Economic Benefits from the Land ensures that the project will result in positive outcomes for the community, including improved standard of living through increased revenues, self-determination, reduced reliance on provincial and federal government funding, and the ability for the community to make decisions about activities and development within their traditional territory.

ES Figure 5.2: Webequie's Three-Tier Approach



In addition to and complementing the Project's Engagement and Consultation Program, there is the opportunity for Indigenous communities to undertake and / or share IKLRU information to inform the EA/IA process.

ES 5.4.3 Indigenous Engagement and Consultation Methods

Methods of engagement and consultation with Indigenous communities and groups included:

- **Online resources**: Project Website;
- **Notices:** Formal Notices, Notification Letters, Monthly Newsletters and Social Media Outreach;
- **Meetings:** Chief and Council Meetings, Community Virtual Information Sessions, First Nation In-person On-Reserve Community Meetings, First Nation Off-Reserve Community and / or Leadership Meeting, Public Information Centres – Open Houses, Topic-Specific Livestream Sessions & Radio Call-in Shows;
- **Forums:** Aboriginal and Treaty Rights and Interest Forums #1 and #2, Three Road Projects Gathering and Expo; and
- **Reports:** Consultation Progress Reports 1, 2 and 3 at Key EA/IA Milestones, Opportunity for Indigenous Communities Review of Early Circulation of Draft EAR/IS, Draft and Final EAR/IS for Review, including Record of Engagement and Consultation.

ES 5.4.4 Summary of Indigenous Engagement and Consultation Activities

Following guidance from the Engagement and Consultation Program, four rounds of consultation were completed:

Consultation Round 1: from October 29, 2021, to September 15, 2022. Key topics included: Overview of EA/IA process; Consultation to date and what we have heard (i.e., during the ToR phase); Study Plans for discipline studies; Criteria and indicators for evaluation and selection of a preferred route and Project effects assessment; Approach for evaluation of alternatives (routes, aggregate areas); Overview and status of baseline studies; IKLRU Program; and Consultation approach and next steps.

Consultation Round 2: from March 9, 2023, to November 23, 2023. Key topics included: Summary of input received from Consultation Round 1; Overview of results of baseline studies to characterize existing conditions within the study area; Identification and evaluation of “alternatives to” the Project and “alternative methods” of carrying out the Project; Criteria and indicators used for the evaluation of alternative methods (e.g., routes, construction camps and aggregate source areas) arranged under factors (e.g., natural environment, technical considerations, Indigenous land use and interests); Preliminary recommended preferred route and locations for supportive infrastructure (aggregate / rock source areas, construction camps, access roads) from multifactor analysis, including rationale for selection; Preliminary engineering design elements of WSR (bridges, culverts, road design); and Next steps and schedule.

Consultation Round 3: from April 21 to September 13, 2024. Key topics included: Summary of input received from Consultation Round 2; Summary of preliminary effects assessment of the Project valued components, including cumulative effects; Incorporation of IKLRU into EA/IA; Proposed impact management, mitigation, and follow-up monitoring program; and Next steps in EA/IA process.

Consultation Round 4: from November 24, 2024 to June 9, 2025. Key topics included: Predicted net effects for valued components after mitigation is applied; What are cumulative effects; What other past, present and future physical activities (projects) are considered in the cumulative effects assessment; How are net cumulative effects managed; and Next steps in EA/IA process.

Targeted Cumulative Effects Assessment Engagement and Consultation: during the EA/IA process, the proponent engaged with Indigenous communities regarding the CEA, and provided the work plan, methodology, results, and proposed impact management measures. To support this process, the proponent also provided targeted consultation opportunities for each Indigenous community and provided measures to accommodate any preferred engagement methods identified to ensure meaningful consultation.

ES 5.4.5 Summary of Issues and Concerns Raised by Indigenous Communities and Groups and Status of Resolution

The detailed feedback received from Indigenous communities and groups, and where applicable Project Team responses to the comments received, including resolution of issues, are contained in Consultation Progress Reports – Rounds 1, 2 and 3 and in the Record of Engagement and Consultation to the EAR/IS. In addition, Round 4 and targeted cumulative effects assessment consultation was undertaken to provide Indigenous communities with targeted opportunities to receive information and provide feedback on the cumulative effects assessment for the Project. A summary report of the consultation with Indigenous communities regarding the cumulative effects assessment is contained in the Record of Engagement and Consultation. Issues and concerns raised by Indigenous communities and groups, including how these are addressed in the Draft EAR/IS, are also further described in each of the valued component effects assessment sections.

ES 5.5 Public and Stakeholder Engagement and Consultation Methods

Methods of engagement and consultation with stakeholder including the Ontario GRT, federal agencies, municipalities, elected representatives, and the public included the following engagement tactics:

- **Online resources**: Dedicated Project Website (www.supplyroad.ca);
- **Notices:** Formal Notices, Notification Letters, Monthly Newsletters and Social Media Outreach; and
- **Meetings:** Public Information.

ES 5.6 Provincial and Federal Agencies Review of Study Plans and Baseline Studies

Following the formal commencement of the EA/IA for the Project, Study Plans for each valued component were prepared and submitted to the MECP and IAAC for review and comments. The purpose of the Study Plans is to outline the proponent's approach to meet the requirements in the TISG and a provincial EA for valued components to be assessed. The Study Plans included:

- Geology, Terrain and Soils Study Plan;
- Surface Water and Groundwater Resources Study Plan;
- Climate Change and Air Quality Study Planes;
- Noise and Vibration Study Plan;
- Fish and Fish Habitat Study Plan;
- Vegetation Study Plan;
- Wildlife Study Plan (excluding birds);
- Migratory Birds Study Plan;
- Species at Risk Study Plan;
- Socio-Economic Study Plan;
- Human Health Study Plan;
- Visual Environment Study Plan; and
- Cumulative Effects Study Plan.

The Project Team also engaged provincial and federal agencies regarding the results from the baseline studies conducted to characterize Natural Environment and Socio-Economic existing conditions in the study area used for the evaluation of project alternatives and the effects assessment.

As part of the review of Study Plans and draft baseline reports, technical meetings were held with provincial and federal agencies to discuss key topics and resolve any issues or concerns.

The detailed feedback received from federal and provincial agencies on the Study Plans and draft baseline study reports, and where applicable Project Team responses to comments including resolution of issues, are contained in the supporting Record of Engagement and Consultation to the Draft EAR/IS and are also further described in each of the valued component effects assessment sections of this document.

ES 5.7 Record of Engagement and Consultation

The Record of Engagement and Consultation is a standalone report that supports the EA/IA and documents all communication and engagement activities undertaken with Indigenous communities and groups, the public, government agencies, and stakeholders, including concerns and issues raised during the EA/IA process, and any proponent responses, resolutions, agreements and commitments.

The Record of Engagement and Consultation for the Project responds to Section 10.5 of the ToR (AtkinsRéalis, 2020a) for the provincial EA and fulfills conditions in the Notice of Approval (NoA) of the ToR. The Record of Engagement and Consultation also meets the requirements in Section 5 (Description of Public Participation and Views) and Section 6 (Description of Engagement with Indigenous Groups) of the TISG to provide a "Record of Engagement" that describes all efforts taken to seek the views of the Indigenous communities and groups, public, and stakeholders a with respect to the Project. A copy of the Record of Engagement and Consultation will be provided to government regulators, Indigenous communities and groups, the public, government agencies, and stakeholders concurrent with the Draft and Final EAR/IS.

ES 5.8 Ongoing and Proposed Future Engagement and Consultation

Feedback received from Indigenous communities, the public and stakeholders during the review period for the Draft EAR/IS, including outcomes from engagement and consultation activities during this period, have been considered by the Project Team to help inform in the development of this Final EAR/IS being submitted to provincial and federal regulators and circulated to all Indigenous communities for review and comments.

Webequie First Nation will continue to work with stakeholders and Indigenous communities and groups to resolve issues and address comments received in writing through the review period for the Final EAR/IS to clarify information on the Project, provide additional information, and discuss potential effects of the Project and proposed mitigation measures.

As the Project is proposed to be operated for an indeterminate time period, it is Webequie First Nation's intention to engage Indigenous communities and Project stakeholders based on foundations of respect, trust, cooperation and open communication on a long-term basis with the intent of building mutually beneficial relationships and addressing the rights, values, traditions, concerns and aspirations of Indigenous communities.

ES 6.0 Evaluation of Project Alternatives – How We Selected Our Road

The EA/IA process requires that two types of project alternatives be considered: “alternatives to the Undertaking” (i.e., functionally different ways of addressing an identified problem or opportunity to arrive at the preferred planning solution) and “alternative methods of carrying out the Undertaking” (options for implementing the preferred planning solution).

The assessment of **“*Alternatives to the Undertaking*”,** subject to the primary objectives of the Project (“Need for the Project”), considered the following five options.

(1) *Do nothing;* which will not provide any social and economic benefits to the community and does not meet the purpose of the undertaking.

(2) *Upgrade the existing trail system to seasonal winter road:* results in lower capital and maintenance costs, yet, would have operational limitations, environmental impacts from watercourse crossings, slower travelling speeds, and restrictions on the range of vehicle types, all of which limit its social and economic benefits.

(3) *Alternative modes of transportation* (hoverbarge, airship, new rail corridor): the lack of proven technology, unproven commercial scale operations and the lack of manufacturers, make the first two options uncertain and unreliable choices over more conventional modes of transportation. A rail line would likely achieve the desired level of social and economic benefits; however, it would command much higher costs, and its environmental impacts would be similar to those caused by construction and operation of an all-season road.

(4) *Manage travel demand:* Travel demand management mechanisms, such as modifying or reducing the need for travel by encouraging the use of alternatives to trip making (e.g., videoconferencing, providing more digital access to training opportunities), are deemed to be an auxiliary benefit associated with any long-term plan for introducing a road corridor within which enhanced communications technology (broadband) can be installed. Under the correct circumstances, this alternative could be implemented in combination with a road ROW and within the same timeframe.

(5) *New all-season road:* The all-season road is a reliable mode of transportation that would achieve the desired level of social and economic benefits. Although the environmental impacts of an all-season road would be higher than some of the other alternative modes of transportation, most of these other alternatives are considered too unreliable to consider further in the evaluation of “Alternatives to the Undertaking”.

Having considered the balance of advantages and disadvantages of each “Alternative to the Undertaking” it was determined the preferred “Alternative to the Undertaking” is the construction of a new all-season road between Webequie and the McFaulds Lake area. Although the capital costs of an all-season road would be higher than most options other than a rail line (much higher costs), the general reliability and the potential for achieving the desired levels of social and economic benefits make this the preferred alternative that was carried forward to the evaluation of “**Alternative *methods*** of carrying out the Undertaking”. The Null (“Do Nothing”) Alternative was also being carried forward as a baseline condition to allow for comparison of impacts.

ES 6.1 Alternative Methods of Carrying out the Undertaking

The approach for evaluating alternative methods of carrying out the Project consisted of an analysis of historical road and transportation studies, followed by a set of comparative analyses using factors and criteria at an increasing resolution, moving from the scale of corridor to route. These studies included extensive examination of alternative road corridors in and around the McFaulds Lake area, as well as alternatives for interconnecting future mine developments and remote First Nations to the provincial highway system.

The alternative road corridors evaluated were limited to those between Webequie First Nation and the McFaulds Lake area. The screening level assessment of alternative corridors was presented in the Ontario approved EA ToR (2021) and Detailed Project Description (2019) submitted to the IAAC. This resulted in the selection of the preliminary preferred development corridor carried forward for more detailed evaluation of routing alternatives in the EA/IA for the Project.

The Project Team considered the MECP Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario (2014) and federal TISG for determining a reasonable range of alternative methods for implementing the WSR.

ES 6.1.1 Screening of Alternative Corridor Concepts

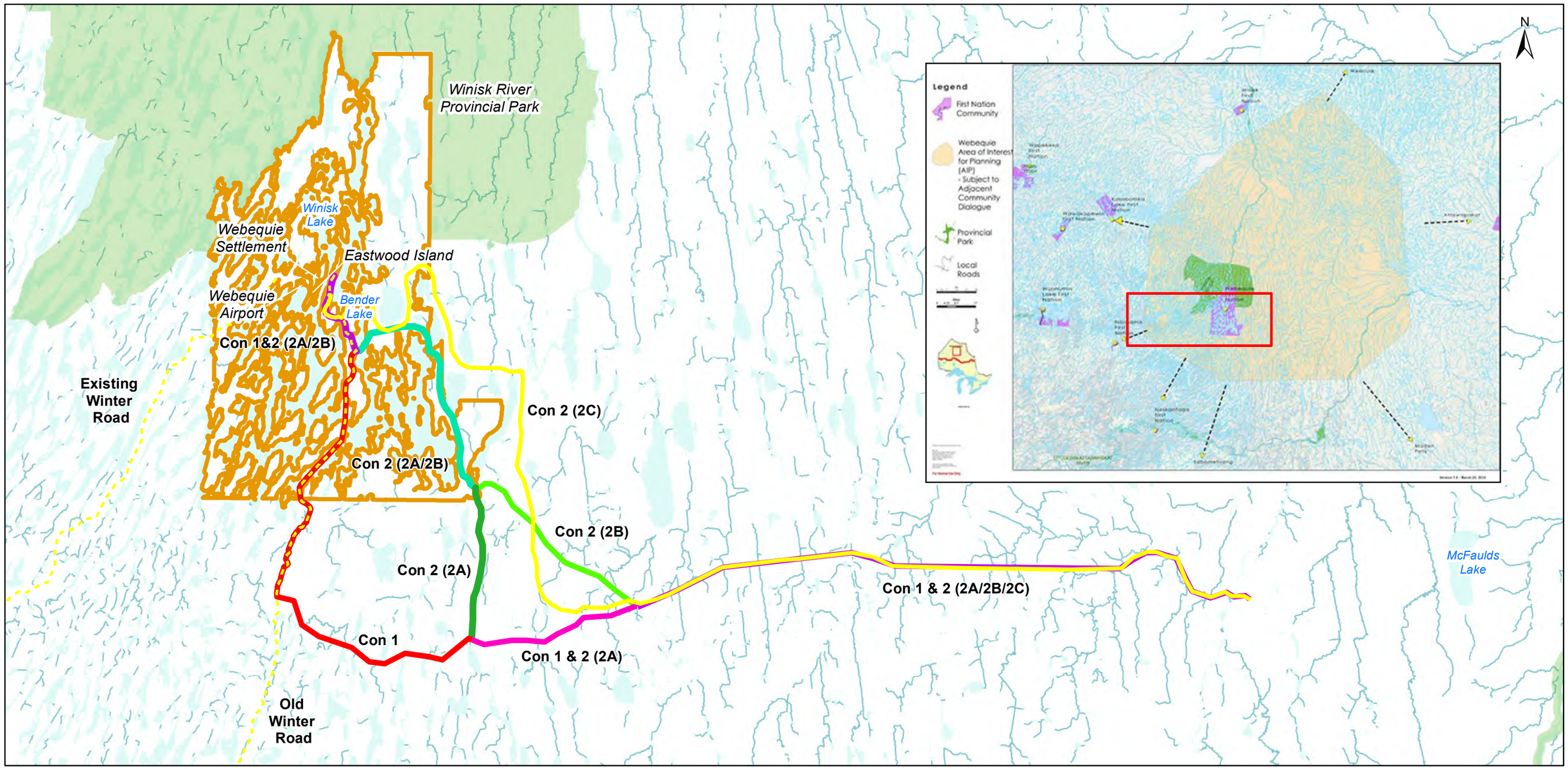
Alternative road corridor concepts were assessed using factors and criteria derived from, select regulatory requirements, information assembled from published sources and previously completed field investigations, and Webequie Community-Based considerations from the Indigenous Knowledge database prepared by Webequie First Nation. In addition, the alternative corridors were also screened against criteria inherent in the broader definition of the environment, as required under the EA Act and in accordance with MECP's Codes of Practice and select VCs under a federal IA:

- Caribou (Boreal population) – Factor 1: Caribou habitat;
- Natural or Built Features – Factor 2: Culturally significant features (natural or built);
- Traditional Use Areas – Factor 3: Areas used intensively for traditional activities;
- Fishing – Factor 4: Fish spawning areas;
- Hunting – Factor 5: Seasonal hunting areas;
- Moose – Factor 6: Moose mating areas;
- Source Water – Factor 7: Community source of spring water;
- Socio-Economic Environment – Factor 8: Business Impacts – Licenced traplines & outfitters;
- Cultural Heritage Resources / Environment – Factor 9: Archaeological potential, Built heritage resources, Burial sites;
- Built Environment – Factor 10: Draft Webequie Community Base Land Use Plan (in-progress/early version), First Nation reserve land;
- Natural Environment – Factor 11: Air, Noise, Waterbody crossings; and
- Technical Considerations – Factor 12: Constructability and cost.

Section 3 of the Draft EAR/IS includes a summary of the comparative analysis results identifying the advantages and disadvantages of the conceptual road corridor alternatives as previously documented in the ToR (2021) and federal Detailed Project Description (2019) for the Project.

Conclusion and Rationale for Selection of the Preferred Corridor – Screening Level Assessment

The detailed screening of alternative corridor concepts concluded that an easterly corridor (Alternative Corridor Concept 2C) is more preferrable than Alternative Corridor Concepts 1, 2A and 2B. The preliminary preferred corridor (Alternative Corridor Concept 2C) is shown in **ES Figure 6.1** below.



Legend:

Road Alignment Alternatives

- Alternative Concept 1 and 2 (2A/2B)
- Alternative Concept 2 (2A/2B)
- Alternative Concept 2 (2A)
- Alternative Concept 2- Alternative 2C
- Alternative Concept 1
- Alternative Concept 1 and 2 (2A)
- Alternative Concept 2 - Corridor Alternative 2B

- Winisk River Provincial Park
- Webequie First Nation Reserve
- Winter Roads (Existing and Abandoned)

0 10 20 Km

Date: 06/03/2025

1. Coordinate System: NAD 1983 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

Webequie Supply Road

Initial Corridor Alternative Concepts
Considered by Webequie Community Members

Reasons for selecting Alternative Corridor Concept 2C as the Webequie community's preliminary preferred corridor include:

- Intersecting fewer known traplines;
- Route is further east and away from significant hunting areas (e.g., waterfowl, moose, etc.) well used by community members;
- Runs east of areas used most intensively for traditional activities south of the community;
- Minimizes intersecting significant moose mating areas located south of the community and north of the proposed east-west section of corridor;
- Minimizes effects to known built heritage resources / cultural heritage landscapes (i.e., cabins, hunting blinds, sacred site);
- Minimizes impacts to Webequie First Nation Reserve lands;
- Minimizes the number of waterbody crossings required;
- Minimizes potential effects to fish and fish habitat, as it has fewer waterbody crossings and shortest route length where structures are required to cross waterbodies; and
- Has the lowest estimated capital cost for construction.

ES 6.1.2 Alternate Routes Identified for Assessment

Having identified Alternative 2C as the preliminary preferred corridor for the WSR, the Project Team moved to the next step of identifying route alternatives within the approximately 2 km wide corridor for further evaluation in the EA/IA with consideration and input from Indigenous communities, stakeholders and the public.

The alternate routes within the preferred corridor that were identified for evaluation included the Webequie First Nation community's preferred route, the optimal geotechnical route, and the optimal engineering route. All three of these potential routes were standardized to a 35 m right-of way to allow for a fair comparison. The potential routes were given numeric identifiers as follows:

- ***Alternative 1:*** Webequie First Nation community's preferred route: Webequie considered area features and sensitivities that may be affected by the Project and VCs identified during past community meetings in 2017, 2018 and 2019 and engagement during the current EA/IA process, as well as environmental criteria as required under the EA Act and in accordance with MECP's Codes of Practice.
- ***Alternative 2:*** optimal geotechnical route: Geotechnical route options were selected to minimize total route length, maximize terrain units of favourable constructability (e.g., glacial till), minimize traverse of units of poor constructability (e.g., fens), minimize the number and widths of stream crossings, and minimize aggregate haul distances. A total of six alternate geotechnical routes were identified and mapped within the preferred corridor.
- ***Alternative 3:*** optimal engineering route: Was identified by adding engineering considerations such as road geometry, complexity of watercourse crossing structures and elevation changes, to geotechnical and environmental, social, economic, and heritage information available and was identified during the EA/IA process by the Project Team.

ES 6.1.3 Method for Selection of Preferred Route Within the Preferred Corridor

The evaluation of the alternative routes within the preferred corridor for WSR was structured based on five (5) Factors, 11 Disciplines, 33 Criteria, and 168 Indicators which were used to comparatively evaluate the route alternatives and other infrastructure alternatives (e.g., location of aggregate source areas or construction camps). They considered their value / ability to discern meaningful differences between the route options for each segment and enable comparison and route selection decisions.

All alternatives were assessed using a geospatial software tool called Pangea and conducting a quantitative comparison using a Multiple Accounts Assessment (MAA) methodology that included a weighting system. Since Alternative Routes 1, 2 and 3 are all located in close geographical proximity to each other with a very similar landscape, standard mitigation measures to minimize and / or control adverse effects are assumed to be applicable and can be uniformly applied to each route; therefore, no specific route offered a discernable specific advantage regarding application of standard and/or site-specific mitigation to address potential effects. Alternative 3 was identified as the preferred route option that was carried forward into the EA/IA. In addition, sensitivity analyses were conducted to demonstrate the reliability and reasonableness of the decisions made through that process by testing how altering the weighting at the factor-level would influence the outcomes of decision-making process.

SIZE 11x17

Lastcedar Lake
Winisk River Provincial Park
Eastwood Island
Webequie Settlement
Webequie Airport
Bender Lake
Garrioch Lake
Plant Lake
Stockman Lake
McMurdo Lake
Odobas Lake
Billinger Lake
Leaver Lake
Greig Lake
Winisk Lake
Morrison Bay
Prime Lake
Deugo Lake
Muketei River
Farrow Lake
Ekwan River
Malloy Lake

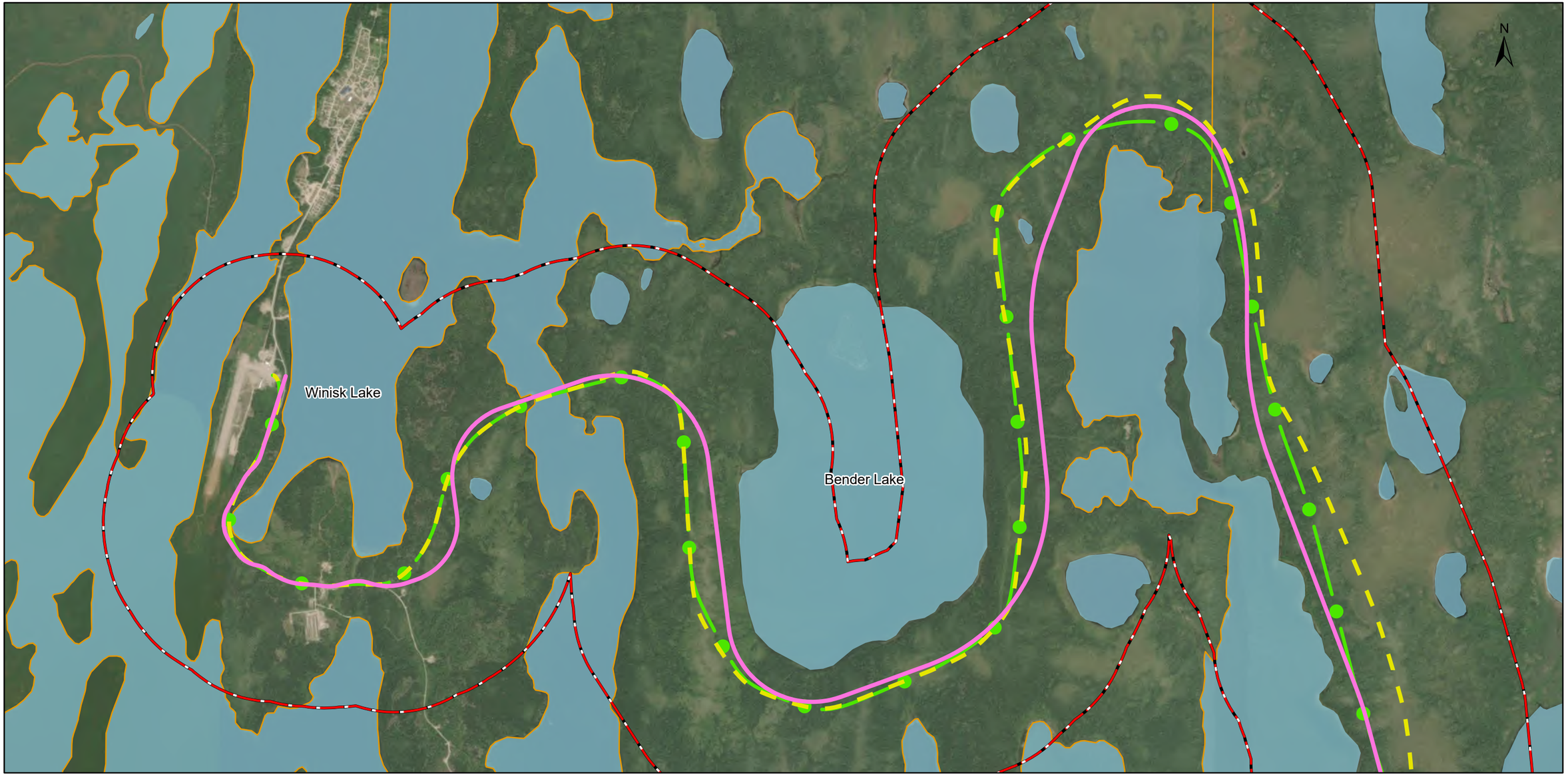
Legend

- Alternative 1
- Alternative 2
- Alternative 3 (Preferred Route)
- Local Study Area (LSA 1km from Centreline of Route Alternative 1, Alternative 2, and Alternative 3)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Webequie First Nation Reserve
- Waterbody
- Watercourse
- Winisk River Provincial Park

0 5 10 Km

Date: 01/19/2026
1. Coordinate System: NAD 1983 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

SIZE 11x17



Legend

- Alternative 1
- Alternative 2
- Alternative 3 (Preferred Route)
- Local Study Area (LSA 1km from Centreline of Route Alternative 1, Alternative 2, and Alternative 3)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Webequie First Nation Reserve
- Waterbody

WSR WEBEQUIE SUPPLY ROAD

NOTES

1. Coordinate System: NAD 1983 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

0 1.25 2.5 Km

Webequie Supply Road (WSR)

Alternative Routes in the Preferred Corridor
Sheet: 1 of 8

Figure Number:		REV:
X		PA

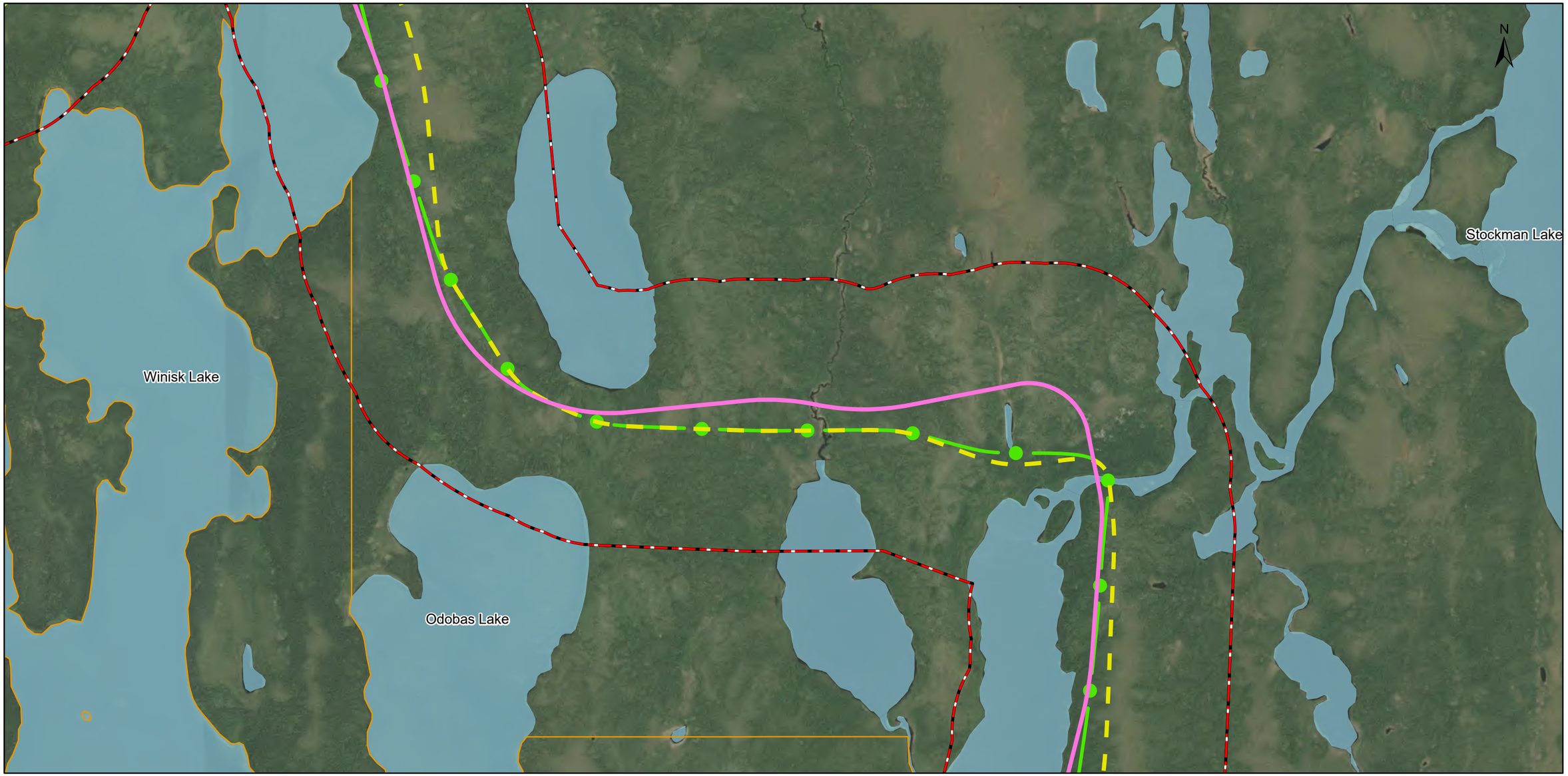
Client:	Project Number:	Date:
Webequie First Nation	661910	12/9/2025

DSC	DRN	CHK	APP
	TE	RS	

SIZE 11 X 17 Service Layer Credits: World Imagery: Earthstar Geographics

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Extension_Report\661910_WSR_CON_ER_AlternativesGeneralStudyArea_0001.aprx

SIZE 11x17



Legend

- Alternative 1
- Alternative 2
- Alternative 3 (Preferred Route)
- Local Study Area (LSA 1km from Centreline of Route Alternative 1, Alternative 2, and Alternative 3)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Webequie First Nation Reserve
- Waterbody

WSR WEBEQUIE SUPPLY ROAD

NOTES

1. Coordinate System: NAD 1983 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

0 1.25 2.5 Km

Webequie Supply Road (WSR)

Alternative Routes in the Preferred Corridor
Sheet: 2 of 8

Figure Number:	REV:
X	PA

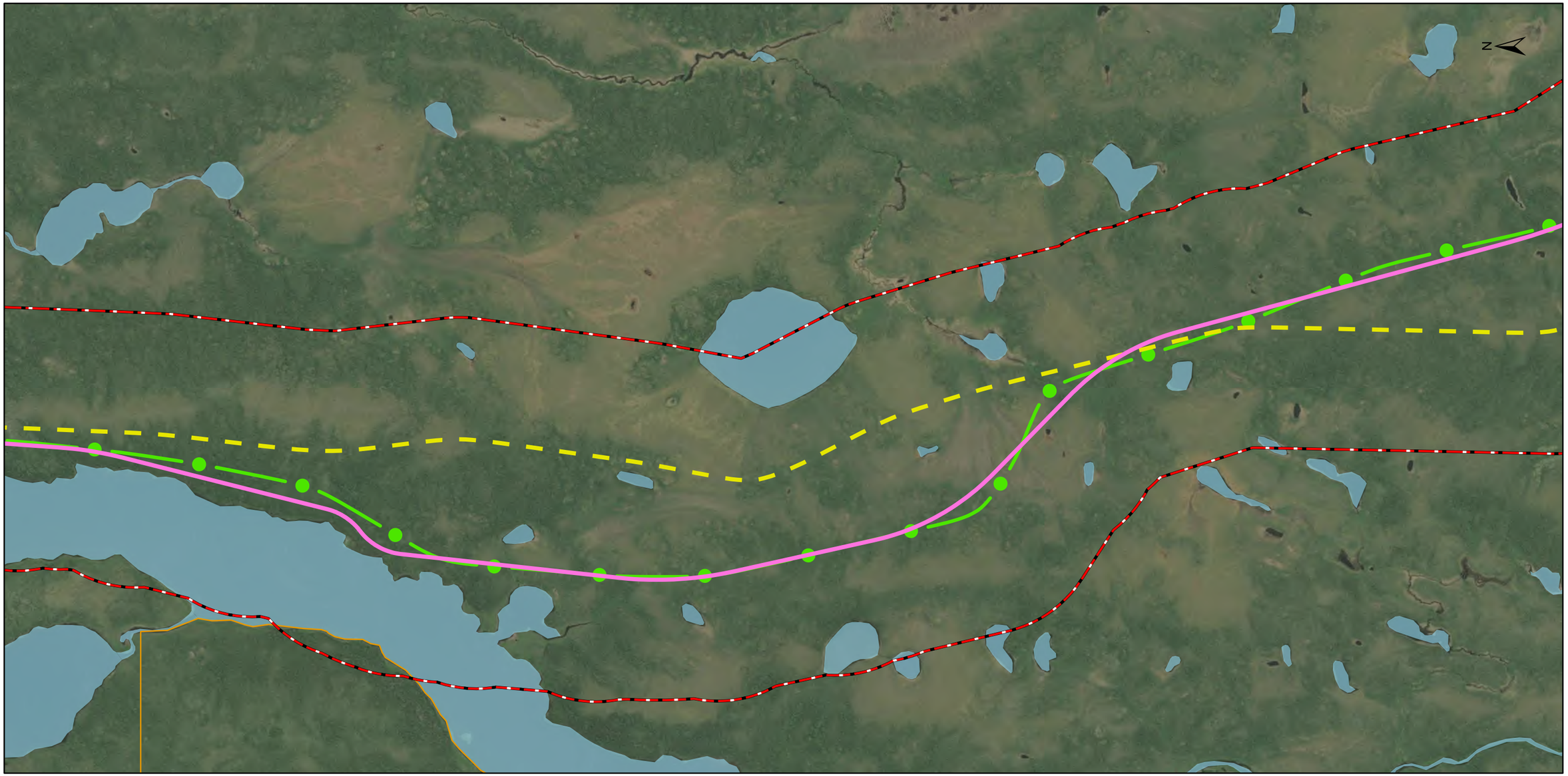
Client:	Project Number:	Date:
Webequie First Nation	661910	12/9/2025

DSC	DRN	CHK	APP
	TE	RS	

SIZE 11 X 17 Service Layer Credits: World Imagery: Vantor
World Imagery: Earthstar Geographics

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Extension_Report\661910_WSR_CON_ER_AlternativesGeneralStudyArea_0001.aprx

SIZE 11x17



Legend

- Alternative 1
- Alternative 2
- Alternative 3 (Preferred Route)
- Local Study Area (LSA 1km from Centreline of Route Alternative 1, Alternative 2, and Alternative 3)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Webequie First Nation Reserve
- Waterbody

WSR WEBEQUIE SUPPLY ROAD

NOTES

1. Coordinate System: NAD 1983 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

0 1.25 2.5 Km

Webequie Supply Road (WSR)

Alternative Routes in the Preferred Corridor
Sheet: 3 of 8

Figure Number:		REV:
X		PA

Client:	Project Number:	Date:
Webequie First Nation	661910	12/9/2025

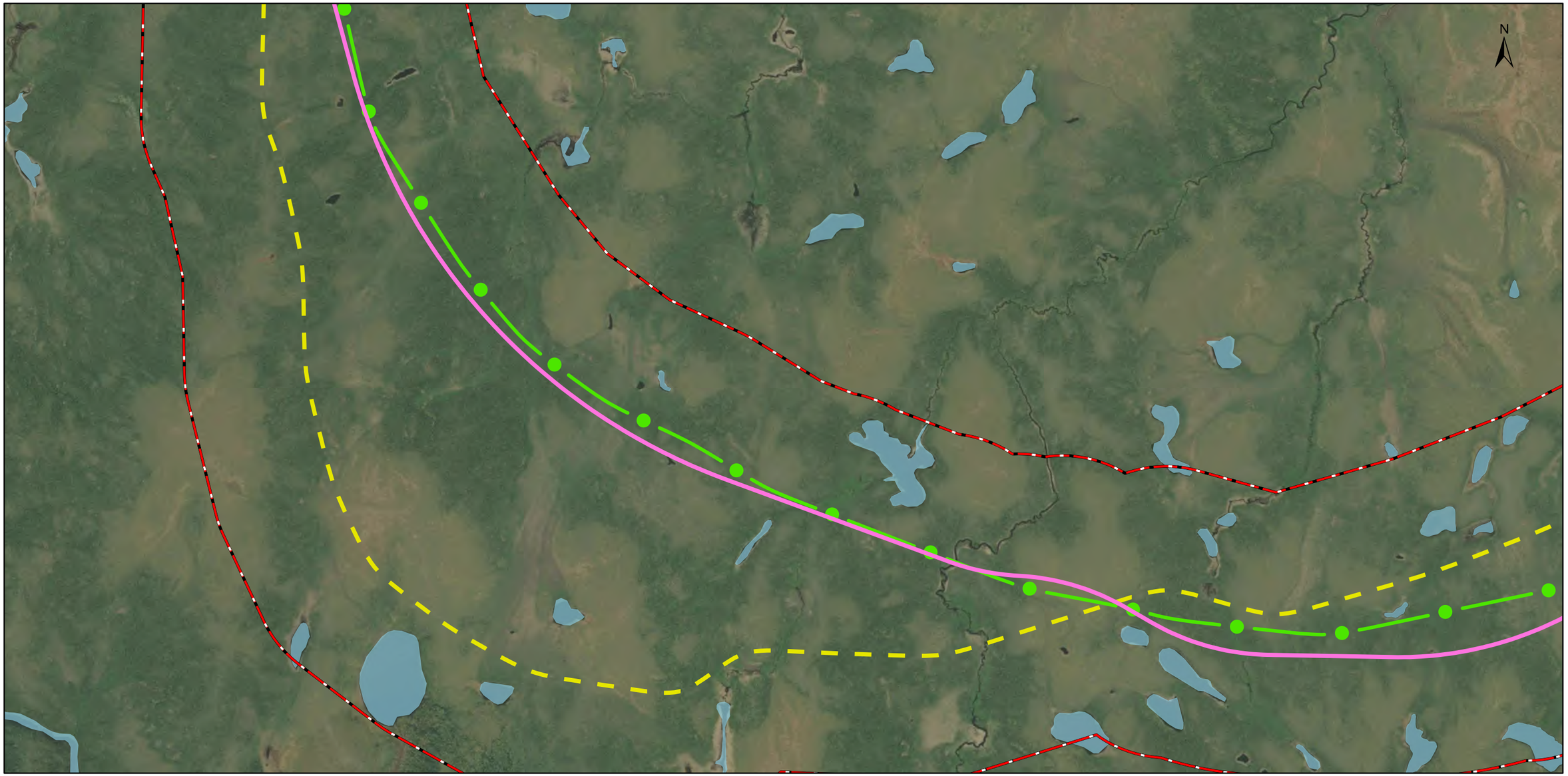
DSC	DRN	CHK	APP
	TE	RS	

SIZE 11 X 17

Service Layer Credits: World Imagery: Vantor
World Imagery: Earthstar Geographics

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Extension_Report\661910_WSR_CON_ER_AlternativesGeneralStudyArea_0001.aprx

SIZE 11x17



Legend

- Alternative 1
- Alternative 2
- Alternative 3 (Preferred Route)
- Local Study Area (LSA 1km from Centreline of Route Alternative 1, Alternative 2, and Alternative 3)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Waterbody

WSR WEBEQUIE SUPPLY ROAD

NOTES

1. Coordinate System: NAD 1983 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

0 1.25 2.5 Km

Webequie Supply Road (WSR)

Alternative Routes in the Preferred Corridor
Sheet: 4 of 8

Figure Number:		REV:
X		PA

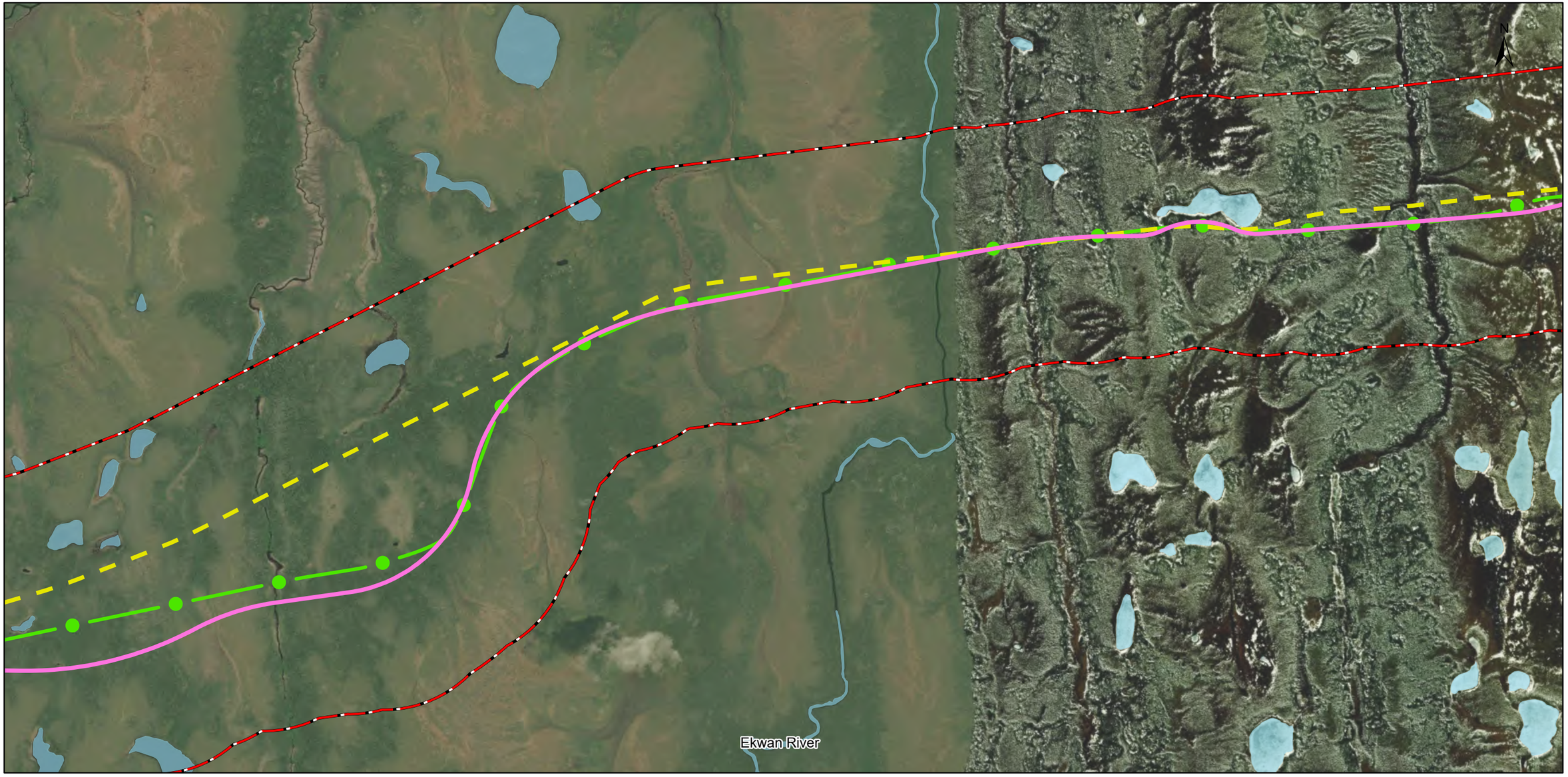
Client:	Project Number:	Date:
Webequie First Nation	661910	12/9/2025

DSC	DRN	CHK	APP
	TE	RS	

SIZE 11 X 17 Service Layer Credits: World Imagery: Earthstar Geographics

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Extension_Report\661910_WSR_CON_ER_AlternativesGeneralStudyArea_0001.aprx

SIZE 11x17



Legend

- Alternative 1
- Alternative 2
- Alternative 3 (Preferred Route)
- Local Study Area (LSA 1km from Centreline of Route Alternative 1, Alternative 2, and Alternative 3)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Waterbody

WSR WEBEQUIE SUPPLY ROAD

NOTES

1. Coordinate System: NAD 1983 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

0 1.25 2.5 Km

Webequie Supply Road (WSR)

Alternative Routes in the Preferred Corridor
Sheet: 5 of 8

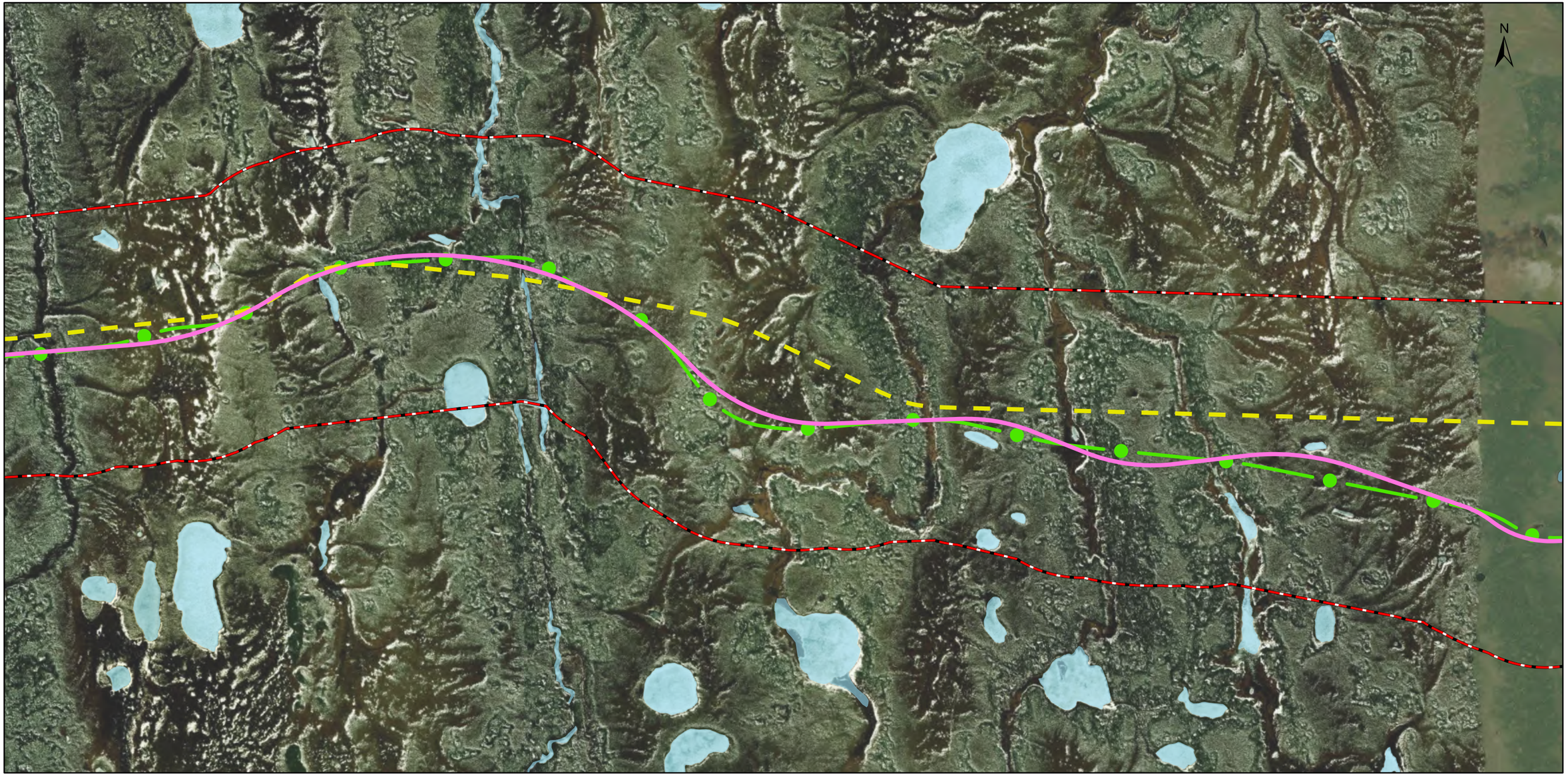
Figure Number:		REV:
X		PA

Client:	Project Number:	Date:
Webequie First Nation	661910	12/9/2025

DSC	DRN	CHK	APP
	TE	RS	

SIZE 11 X 17 Service Layer Credits: World Imagery: Earthstar Geographics

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Extension_Report\661910_WSR_CON_ER_AlternativesGeneralStudyArea_0001.aprx



SIZE 11x17

Legend

- Alternative 1
- Alternative 2
- Alternative 3 (Preferred Route)
- Local Study Area (LSA 1km from Centreline of Route Alternative 1, Alternative 2, and Alternative 3)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Waterbody

WSR WEBEQUIE SUPPLY ROAD

NOTES

1. Coordinate System: NAD 1983 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

0 1.25 2.5 Km

Webequie Supply Road (WSR)

Alternative Routes in the Preferred Corridor
Sheet: 6 of 8

Figure Number:	X	REV:	PA
Client: Webequie First Nation	Project Number: 661910	Date: 12/9/2025	

DSC	DRN	CHK	APP
	TE	RS	

SIZE 11 X 17 Service Layer Credits: World Imagery: Earthstar Geographics

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Extension_Report\661910_WSR_CON_ER_AlternativesGeneralStudyArea_0001.aprx

SIZE 11x17

N

Legend

- Alternative 1
- Alternative 2
- Alternative 3 (Preferred Route)
- Local Study Area (LSA 1km from Centreline of Route Alternative 1, Alternative 2, and Alternative 3)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Waterbody

WSR WEBEQUIE SUPPLY ROAD

NOTES

1. Coordinate System: NAD 1983 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

DISCLAIMER

0 1.25 2.5 Km

Webequie Supply Road (WSR)

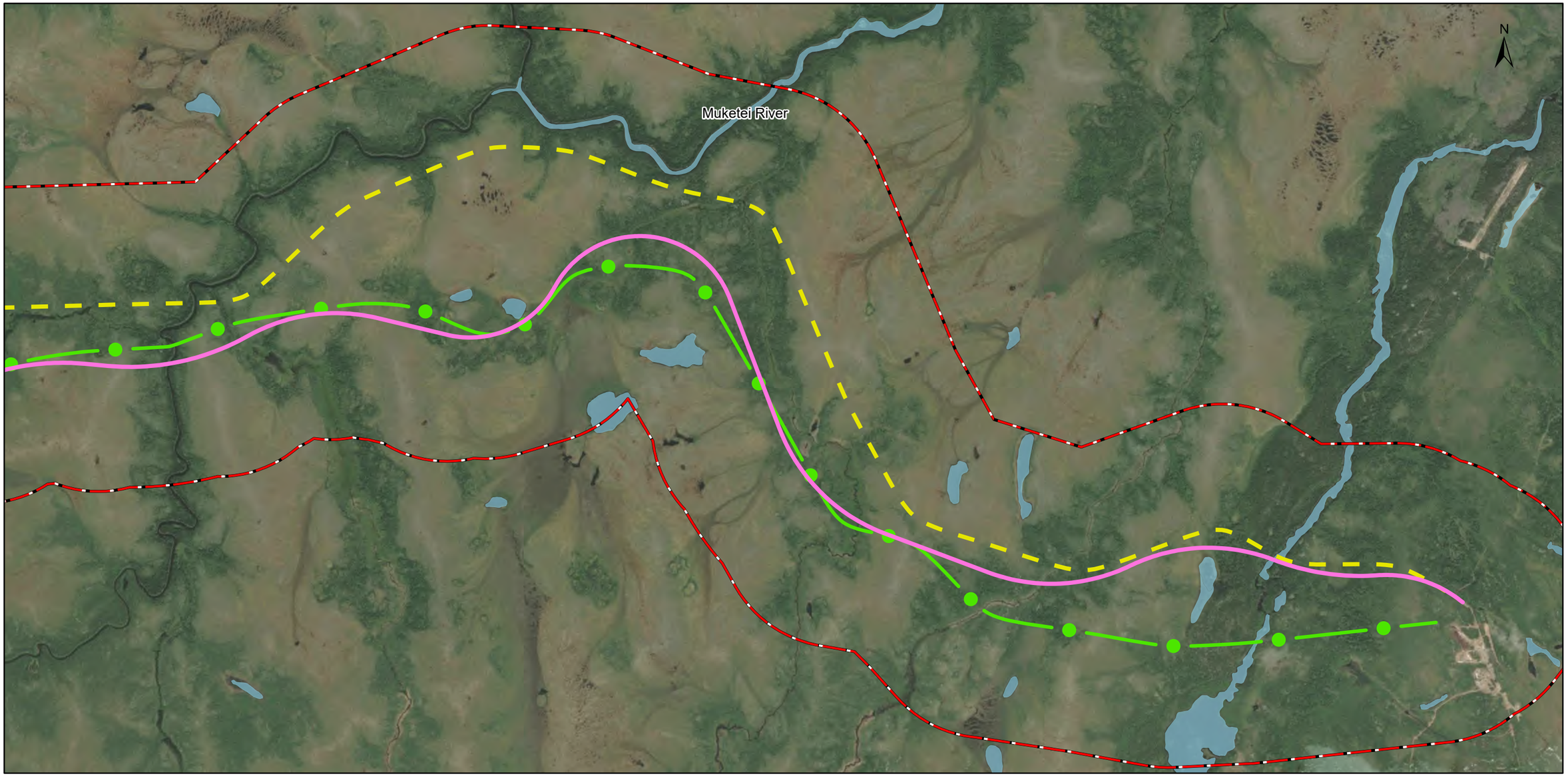
Alternative Routes in the Preferred Corridor
Sheet: 7 of 8

Figure Number:	X	REV:	PA
Client: Webequie First Nation	Project Number: 661910	Date: 12/9/2025	
DSC		DRN: TE	CHK: RS / APP:

SIZE 11 X 17 Service Layer Credits: World Imagery: Earthstar Geographics

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Extension_Report\661910_WSR_CON_ER_AlternativesGeneralStudyArea_0001.aprx

SIZE 11x17



Legend

- Alternative 1
- Alternative 2
- Alternative 3 (Preferred Route)
- Local Study Area (LSA 1km from Centreline of Route Alternative 1, Alternative 2, and Alternative 3)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Waterbody

WSR WEBEQUIE SUPPLY ROAD

NOTES

1. Coordinate System: NAD 1983 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

0 1.25 2.5 Km

Webequie Supply Road (WSR)

Alternative Routes in the Preferred Corridor
Sheet: 8 of 8

Figure Number:		REV:
X		PA

Client:	Project Number:	Date:
Webequie First Nation	661910	12/9/2025

DSC	DRN	CHK	APP
	TE	RS	

SIZE 11 X 17 Service Layer Credits: World Imagery: Earthstar Geographics

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Extension_Report\661910_WSR_CON_ER_AlternativesGeneralStudyArea_0001.aprx

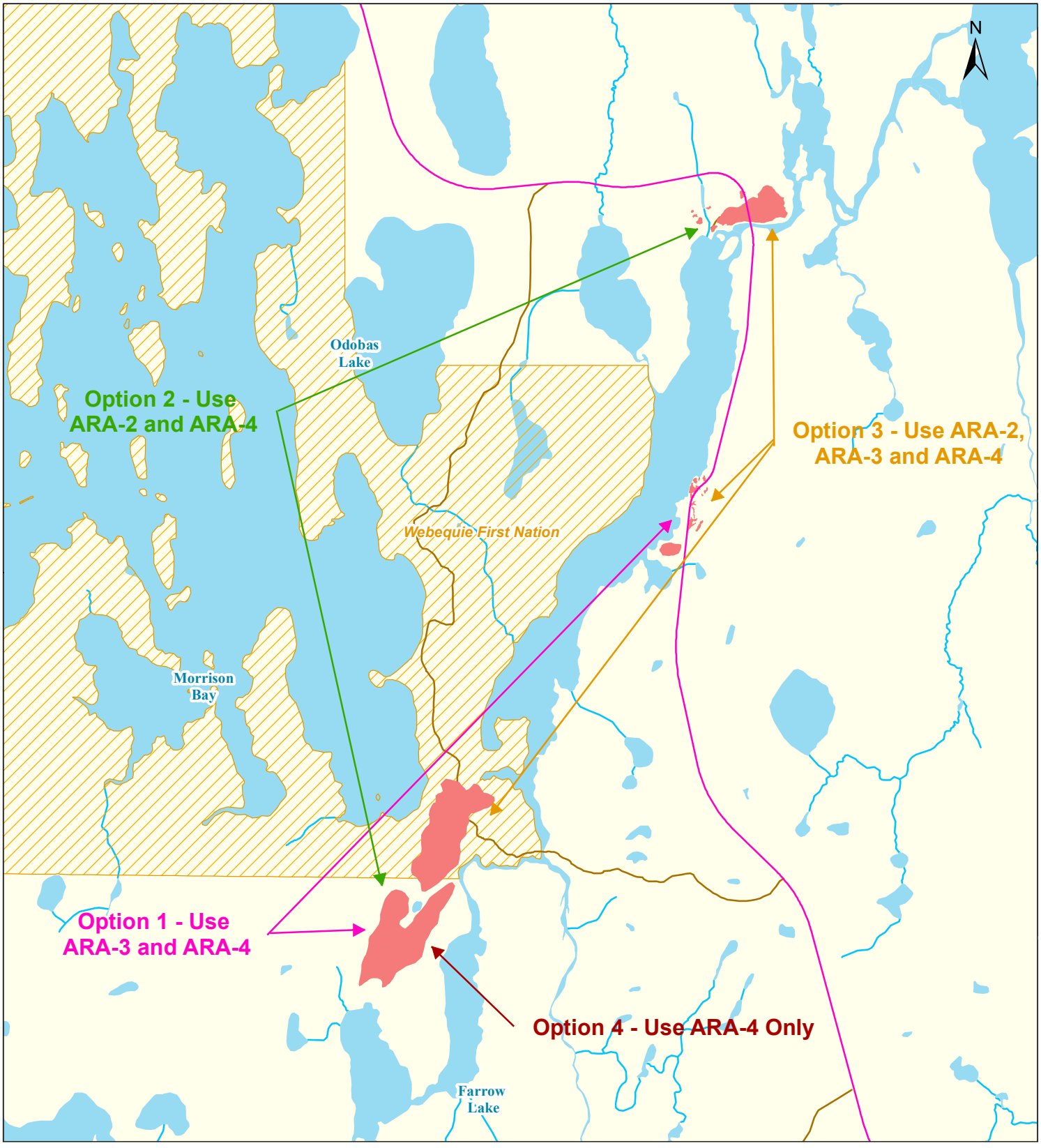
ES 6.1.4 Project Supportive Infrastructure Alternatives

The Project Team also evaluated alternative methods related to supportive infrastructure that included alternative location for aggregate sources areas and temporary construction camps.

Aggregate Source Areas

The Project Team began its investigations into 11 potential aggregate sources by examining alternatives at a screening level to eliminate alternatives with fatal flaws (i.e., presence of VCs that would preclude development of the aggregate resource) before completing a full evaluation to select the preferred aggregate source(s). Three viable sites were carried forward for further consideration: ARA-2 (TP19-02), ARA-3 (TP19-09), ARA-4 (TP19-10). The following four possible combinations or options were noted as able to provide the aggregate types and quantities required: ARA-3 and ARA-4 (Option 1); ARA-2 and ARA-4 (Option 2); ARA-2 and ARA-3, and ARA-4 (Option 3); and ARA-4 only (Option 4).

Based on a comparison of options considering quantity, access, proximity to Webequie, long-term viability and multifactor scoring, the Option 2 consisting of ARA-2 and ARA-4 was identified as the preferred source of aggregate for the Project. **ES Figure 6.3** below shows the relative locations of the potential aggregate sources.



Legend

- Preferred Route
- Aggregate Source
- Access Road
- Webequie First Nation Reserve
- Waterbody
- Watercourse

0 2.5 5 Km

Date: 06/03/2025

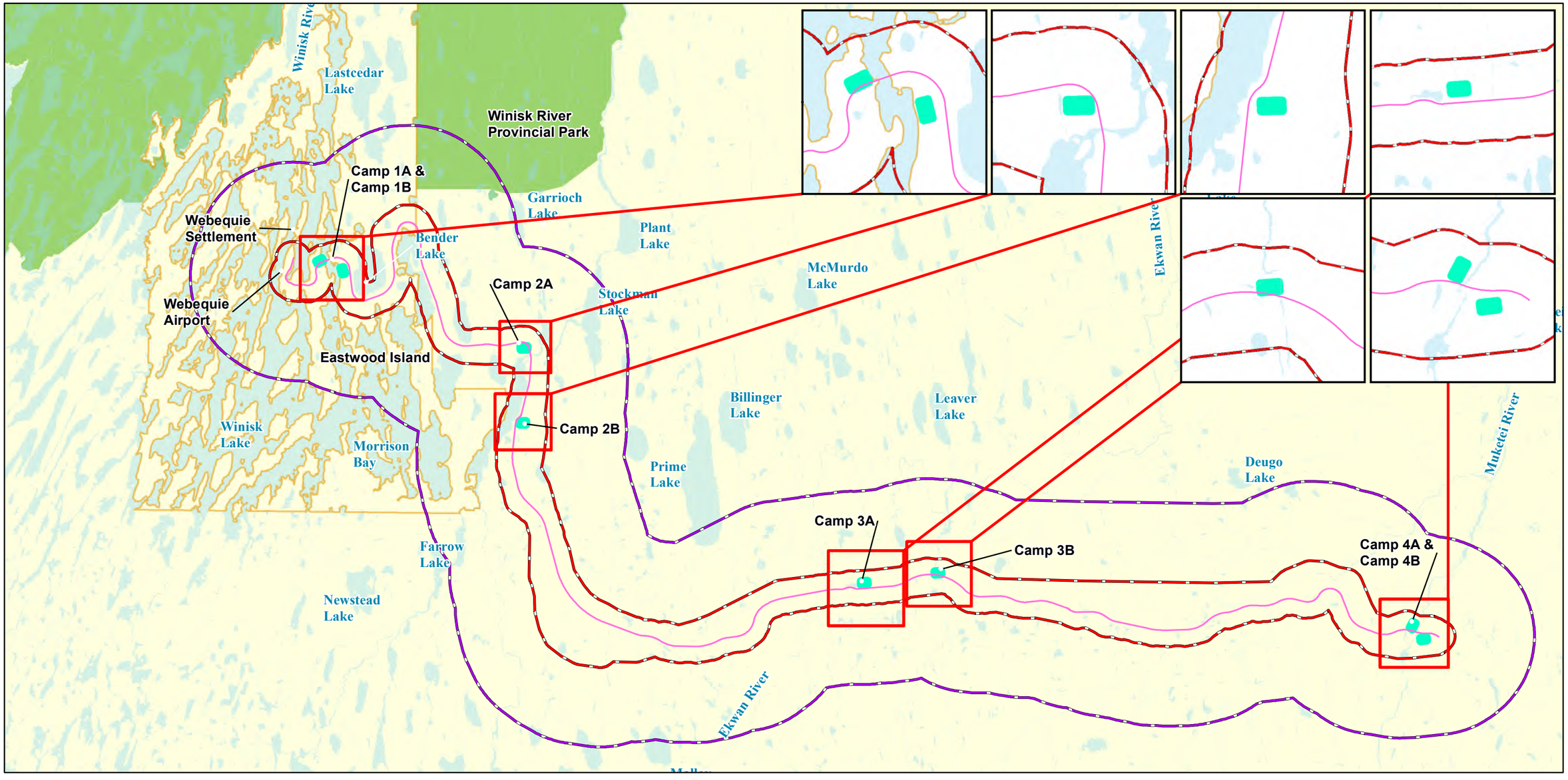
1. Coordinate System: NAD 1983 UTM Zone 16N.
2. Cadastral boundaries are for informational purposes only and should not be considered suitable for legal, engineering, or surveying purposes.
3. Topographic/landcover features obtained from CanVec v12.0 dataset, Natural Resources Canada Earth and Sciences 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

Webequie Supply Road

Locations of Options for Supplying Aggregate

Construction Camps

To allow for safety of workers and productive construction of the road, four construction camps are needed along the length of the route – two in north to south section and two in west to east section. Two camp options were identified for each of the four required locations along the route and then the preferred option between each pair was selected based on a comparison of factor-level results of the Pangea model run under the MAA methodology for each pairing of camp options. The camp locations that were selected included Camp 1A, Camp 2A, Camp 3A and Camp 4B are shown in **ES Figure 6.4** below.



Legend

- Preferred Route
- Local Study Area (LSA 1km from Centreline of Route Alternatives)
- Regional Study Area (RSA 5km from either side of LSA Boundary)
- Potential Construction Camps and/or Laydown Areas (specific location to be determined based on selection of preferred route)
- Webequie First Nation Reserve
- Winisk River Provincial Park
- Waterbody
- Watercourse

0 10 20 Km

Date: 06/03/2025
1. Coordinate System: NAD 1983 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

Webequie Supply Road
Construction Camp Options

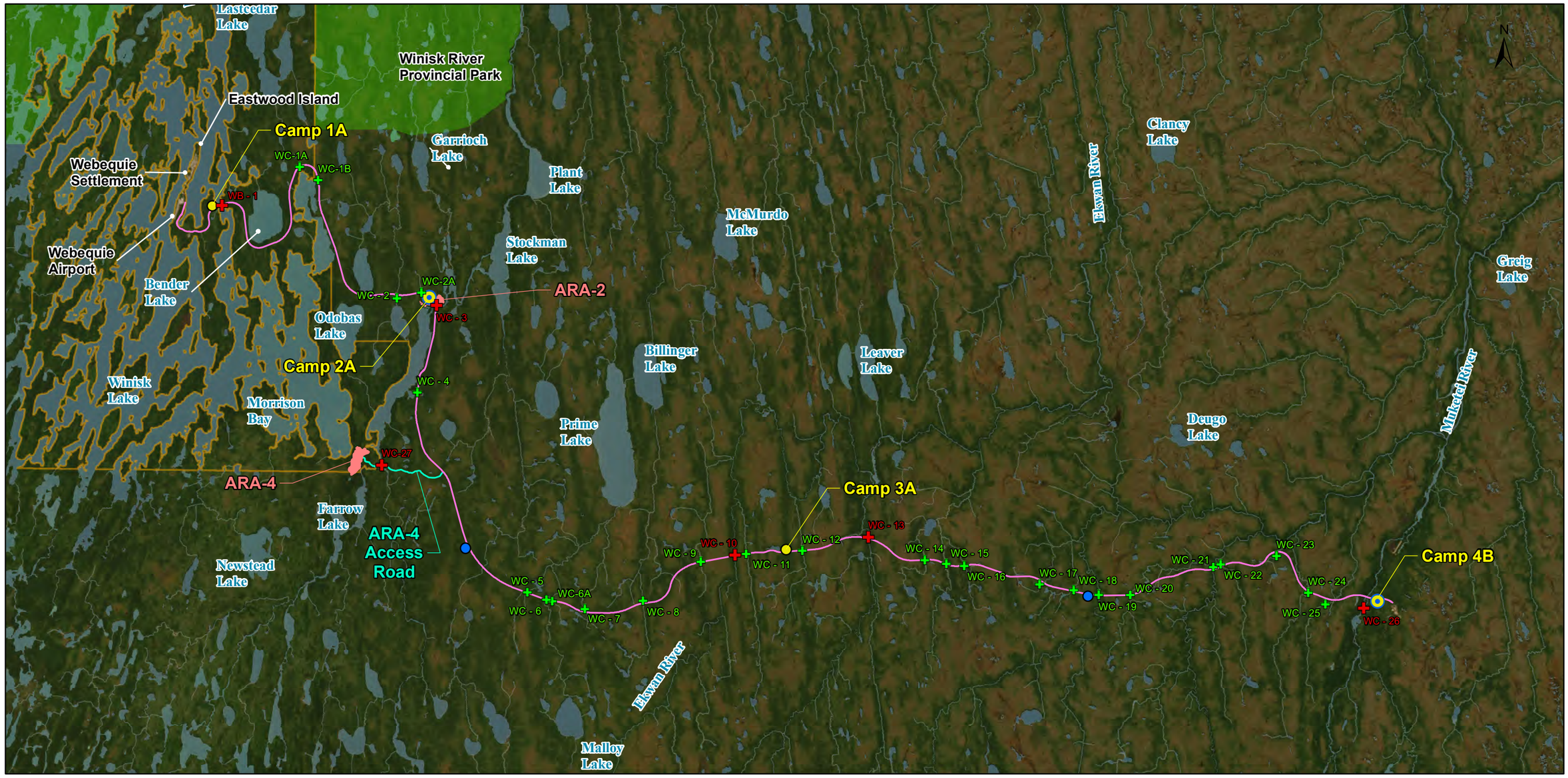
SIZE 11 X 17 Service Layer Credits:

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Alternatives_Evaluation\661910_WSR_ALT_ConstructionCampOptionsSimplified_0001_0002.mxd

SIZE 11x17

ES 7.0 Project Description

The Project is located on un-surveyed Ontario Crown lands and Webequie First Nation Reserve lands and is located approximately 525 km northeast of Thunder Bay. The proposed WSR will extend in a southeast direction from the community of Webequie, then easterly to a termination point near McFaulds Lake. As noted previously the WSR is a proposed two-lane all-season road that is 107 km in length and is approximately 12 to 13 m wide within a fully cleared ROW of 35 m in width. Supportive infrastructure is required as part of the Project and includes aggregate / rock source areas (i.e., pit / quarries), temporary construction camps with storage and laydown yards, rest and maintenance areas, access roads and a permanent Maintenance and Storage Facility (MSF). **ES Figure 7.1** illustrates the location of key project components, including the supportive infrastructure needed for construction and operations of the WSR. Refer to **Section ES 2.0** for a description of the project components, including supportive infrastructure.



Legend

- Preliminary Recommended Preferred Route
- Webequie First Nation Reserve
- Winisk River Provincial Park
- Waterbody
- Watercourse
- ARA-4 Access Road
- Recommended Aggregate/Rock Source
- Recommended Construction Camps
  *Camp 2-A is to include permanent Maintenance and Storage Facility (MSF) / maintenance areas for operations of the WSR.
- Maintenance Turnaround Area
- Maintenance and Rest Area
- Waterbody crossing by culvert
- Waterbody crossing by bridge

0 10 20 Km

Date: 06/03/2025
1. Coordinate System: NAD 1983 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

Webequie Supply Road
Locations of Project Components

SIZE 11 X 17 Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Document Path: \\tor01\PROJECTS\E&W\Projects\661910 - Webequie First Nation Supply Rd\40_Execution\45_GIS_Dwgs\MXD\Alternatives_Evaluation\661910_WSR_ALT_ProjectComponentsSimplified_0001_0002.mxd

SIZE 11x17

ES 7.1 Project Design and Planning

ES 7.1.1 Road Design and Applicable Design Criteria and Standards

The Project will be designed, constructed and operated according to design codes, standards and guidelines that are applicable to Ontario highway projects. The WSR is classified as a Rural Collector Undivided facility and design standards for the WSR are consistent with those used by the Ontario Ministry of Transportation for similarly classified roads in the northeast and northwest regions of the province.

The design criteria and standards applied to a road project are based on, but not limited to, the classification of the road, its purpose and anticipated traffic volume, including the mix and type of vehicles (e.g., cars, heavy and light trucks. etc.). Based on the low population density in the project study area, proposed road usage and the intended stated purpose of the WSR, an average annual daily traffic (AADT) volume of less than 500 vehicles has been projected for the Project.

Design criteria were established for developing the preliminary engineering design for the WSR in context of the above primarily MTO standards and guidelines, and in some cases design standards have been exceeded to include resiliency to address the effects of climate change.

ES 7.1.2 Environmental Planning

Environmental issues and the social and economic well-being of Webequie First Nation and other Indigenous communities were considered in the earliest stages of Project planning and design and are an integral part of Webequie's overall approach for developing the Project. This allowed the Project to avoid adverse effects where possible and, where they could not be avoided, establish mitigation measures to reduce potential effects to acceptable levels. To the extent practical, the Project design incorporated the following design considerations, while also considering technical and cost factors:

- Minimize the length of the road to the degree possible and practical;
- Avoid either difficult or poor-quality terrain, where possible and/or practical;
- Minimize the requirements for access roads and other supportive infrastructure;
- Minimize waterbody crossings;
- Avoid or minimize effects to identified sensitive land and resource use areas of value or interest to Indigenous communities;
- Avoid interactions with designated environmentally sensitive areas or critical habitats for wildlife, including species at risk, where practical; and
- Avoid and / or minimize effects to areas and sites of known archaeological and / or cultural heritage importance.

After completion of the EA/IA, the Detail Design Phase for the Project will commence and the construction execution approach will be finalized, including incorporation of potential route refinements, siting of supportive infrastructure (e.g., construction camps), mitigation, and monitoring, as identified in this EAR/IS.

ES 7.2 Project Activities

ES 7.2.1 Construction Phase Activities

The construction and commissioning of the WSR is expected to take approximately 5 to 6 years, after securing all the necessary approvals, permits, licences, authorizations and clearances to construct. The detailed staging and sequencing of construction will be determined in the future Detail Design phase of the Project with input from Indigenous communities and the construction contractor.

Key activities that are expected to be carried out during the construction phase of the Project include:

- Field surveys, staking and layout;
- Vegetation clearing and grubbing;
- Construction and use of supportive infrastructure:
  - Construction camps with laydown / storage yards;
  - Access roads and temporary waterbody crossings;
  - Pits / Quarries – aggregate extraction and processing, including blasting; and
  - Maintenance and Storage Facility (establishment only, not used).
- Construction of road, including earth excavation, grading and hauling operations;
- Construction of permanent waterbody crossings;
- Materials and Equipment Delivery;
- Emissions, discharges and waste;
- Cleanup and site restoration, including the decommissioning and removal of temporary infrastructure excluding those which may be formalized and used for the operations phase of the Project;
- Implementing environmental protection and mitigation measures (to eliminate or reduce potential adverse effects on valued components; and
- Environmental Monitoring.

ES 7.2.2 Operations Phase Activities

The operations phase of the Project is considered to be 75-years based on the expected timeframe when major refurbishment of the road components is anticipated and will start after completion of construction. Maintenance and repair activities, such as routine scheduled grading and resurfacing of the road, asphalt road surface repairs (e.g., potholes), management of vegetation and rehabilitation / repair will be conducted for the proposed WSR.

The designated operator of the Webequie Supply Road will develop specific operational and maintenance procedures and standards for the road that will be consistent with municipal and / or provincial guidelines for level of service. Specifically, this will include the maintenance quality standards for winter operations and other operations, as described in the MTO Maintenance Manual (2003) for a Class 4 type classification of a provincial highway. 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 ensure the road meets the minimum standards for roadside safety and

is a reliable connection to allow for the movement of materials, supplies and people from Webequie to the McFaulds Lake area to support mineral exploration activities and mining developments.

Key activities of variable frequency that are expected to be carried out during the operations phase of the Project, include:

- Visual patrols and inspections of the road;
- Vegetation management;
- Repair and / or rehabilitation of culverts and bridges at waterbody crossings;
- Resurfacing and repair to road surface and shoulders;
- Aggregate and rock extraction and processing, including asphalt / chip seal production at ARA-4 site;
- Dust control;
- Road drainage system maintenance and repairs – drainage cross-culverts, ditches and inlet / outlet areas;
- Access road maintenance;
- Maintenance and Storage Facility;
- Winter maintenance – snow clearing;
- Spills and emergency response;
- Waste and excess materials management;
- Equipment maintenance, repair and servicing;
- Implementing environmental protection and mitigation measures to eliminate or reduce potential adverse effects on valued components; and
- Environmental Monitoring.

ES 7.3 Project Workforce Requirements

The Project will utilize a combination of union and non-union contractors, with a focus on utilizing local (Indigenous) labour to complete the work. Qualified trade contractors and their retained workforces will be utilized throughout the construction and operations phases. It is anticipated that much of the labour force may come from outside the community of Webequie First Nation (e.g., from elsewhere in Ontario or out-of-province) and could be non-unionized.

The direct and indirect workforce requirement for the Project construction phase is anticipated to range from a low of 114 workers in year 4 of construction and peaking at approximately 243 workers in year 2 of construction. Direct workforce will account for most of the Project construction workforce requirement and their work will be based at the Project site. To support the safe, timely and controlled execution of the Project, indirect employment will be required for a project office, supporting Information Technology, communication services, survey and control, quality control / quality assurance service laboratories, document control, engineering supports, material monitoring and control, emergency response, health and safety resources, environmental monitoring systems / equipment and security.

The Project will be operated for an indeterminate time period, requiring an estimated workforce of 16 full-time workers per year.

In addition to direct and indirect employment, the Project will have beneficial effects on Indigenous employment training and business contracting opportunities from use of goods and services during construction and operations.

ES 7.4 Management Plans

The two key management plans that will be developed for the Project are the Construction Environmental Management Plan (CEMP) and the Operation Environmental Management Plan (OEMP). These environmental management plans are intended to provide clear direction to the proponent and its contractors on managing the potential environmental, social, health and cultural risks during construction and operations of the Project.

ES 7.4.1 Construction Environmental Management Plan Framework

The CEMP will provide guidance on mitigation measures that will be implemented prior to and throughout the construction phase of the Project to either avoid or minimize the potential for adverse environmental effects. The component management plans that will be included as part of the CEMP are:

- Air Quality and Dust Control Management;
- Archaeological Resources Management;
- Construction Blasting Management;
- Construction Traffic Management;
- Construction Waste Management (including Hazardous, Contaminated and Controlled Materials);
- Employment and Procurement Plan;
- Environmental and Cultural Awareness and Education Plan;
- Erosion and Sediment Control Plan;
- Fish and Fish Habitat Management;
- Groundwater Management;
- Health and Safety Management;
- Noise and Vibration Management;
- Air Quality / Greenhouse Gases (GHG) Management;
- Fuel Storage and Handling;
- Site Restoration and Monitoring Plan;
- Spill Prevention and Emergency Response Management;
- Surface Water and Storm Water Management and Monitoring;
- Soil Management;
- Vegetation Management (includes Wetlands / Peatlands, Sensitive Habitat, Control of Invasive Plants); and
- Wildlife Management Plan (includes species at risk).

ES 7.4.2 Operations Environmental Management Plan Framework

The OEMP will also have component management plans, similar to the CEMP. The component management plans within the OEMP are expected to include:

- Erosion and Sediment Control;
- Fish and Fish Habitat Management;
- Energy Management;
- Health and Safety Management;
- Noise Management;
- Fuel Storage and Handling;
- Inspection, Maintenance and Repair / Rehabilitation of Road and Supportive Infrastructure;
- Spill Prevention and Emergency Response Management;
- Surface Water and Storm Water Management and Monitoring;
- Vegetation Management (Wetland / Peatlands, Sensitive Habitat, Control of Invasive Plants); and
- Wildlife Management (including species at risk).

ES 8.0 Summary of Effects Assessment on Valued Components

This section provides a summary of the effects assessment on the following Valued Components (VCs) considered in the EA/IA for proposed Webequie Supply Road Project.

- Geology, Terrain and Soils;
- Surface Water Resources;
- Groundwater Resources;
- Atmospheric Environment – Air Quality, Climate Change and Noise and Vibration;
- Fish and Fish Habitat;
- Vegetation and Wetlands;
- Wildlife and Wildlife Habitat;
- Species at Risk;
- Social Environment;
- Economic Environment;
- Non-Traditional Land and Resource Use;
- Human Health;
- Visual Environment;
- Indigenous Peoples's and Impacts to the Exercise of Aboriginal and Treaty Rights; and
- Cultural Heritage Resources.

The summary of the assessment of each valued component is presented in the following manner:

- Scope of the Assessment;
- Existing Conditions;
- Potential Effects and Mitigation Measures;
- Predicted Net Effects and Determination of Significance;
- Result of Cumulative Effects; and
- Follow-up and Monitoring.

The detailed methodology used for assessment of the Valued Components is outlined in Section 5 of the EAR/IS.

ES 8.1 Assessment of Effects on Geology, Terrain, and Soils

ES 8.1.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Geology, Terrain, and Soils VC, the following identified subcomponents for Geology Terrain and Soils were examined in the assessment:

- Alteration of Geomorphology and Geochemistry;
- Alteration of Topography and Terrain;
- Changes to Soil Quality; and
- Loss of Soil Resources (quantity).

ES 8.1.2 Existing Conditions Summary

Existing conditions for Geology, Terrain, and Soils VC were established through a desktop review and field surveys conducted in 2019, 2020, and 2021. Background information sources reviewed included previously conducted environmental studies; Indigenous Knowledge information; feedback obtained through consultation; regulatory databases; terrain and soil mapping; bedrock and quaternary geology data; Geographic Information System databases; academic literature; and Information obtained from regulatory agencies and other stakeholders.

The existing conditions for geology, terrain and soils are described in detail in Appendix F – Natural Environment Existing Conditions (NEEC) Report and are summarized in Section 6 of the EAR/IS.

ES 8.1.3 Potential Effects and Mitigation Measures

Project components and activities (e.g., road construction, grading, excavation, etc.,) may cause potential effects on the Geology, Terrain and Soils VC. A summary of potential effects on the Geology, Terrain, and Soils VC and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Geology, Terrain, and Soils VC

Effects to Geomorphology and Geochemistry: The Project may cause changes to geochemical conditions, including potential for metal leaching (ML) and acid rock drainage (ARD); visual loss of and changes to geologic features; landscape deformation such as slumping, folds, or sliding as well as visual loss of geologic features.

Proposed Mitigation Measures During Construction

- Limiting disturbance footprint to the permanent development area and associated temporary supportive infrastructure during construction.
- The disturbed areas will be restored with native soils (removed or excavated in the same area) or materials that are more permeable than the native soils, where practical, and covered by native vegetation. This can help restore or increase infiltration rates and groundwater levels and prevent or reduce soil erosion.
- Minimizing disturbance footprint to previously disturbed areas during decommissioning.
- Re-contour, stabilize, and re-vegetate disturbed areas to suit original conditions.
- Use rock ripping, hammering, or drilling where possible to minimize blasting.
- Where blasting is used, design blast patterns to minimize ground disturbance beyond the excavation area.
- A Site Restoration and Monitoring Plan will be developed in consultation with rightsholders and stakeholders and implemented for the Project. This will include, but not limited to, soil salvage and management; details of restoration planting requirements (e.g., plant species list, number, size, and plant spacing, specifications for seeding; and post-construction monitoring, maintenance and care).

Proposed Key Mitigation Measures Applicable to Construction and Operations

- Dust control measures will be implemented when deemed necessary.
- Prior to the development of quarry sites, the potential for ARD will be further assessed. If the Project chooses to use materials or sites that are identified as having uncertain or known potential for ML/ARD, mitigative measures, sensitive receptor identification, and / or supplemental baseline studies will be completed in future development phases. Amongst other things, this may include infrastructure to divert or lower the water table, subdrains, and / or ongoing monitoring of surface and groundwater.
- The following management plans will be developed and implemented for the Project: Construction Waste Management Plan; and Spill Prevention and Emergency Response Management Plan. This plan will lay out the requirements for training and procedures for the storage, handling, and transportation of potential contaminants, as well as equipment operation and maintenance intended to prevent spills from occurring.

Project Effects and Key Mitigation Measures: Geology, Terrain, and Soils VC
Proposed Mitigation Measures During Operations ▪ Limiting disturbance footprint to the permanent development area and associated temporary supportive infrastructure during construction. ▪ Use rock ripping, hammering, or drilling where possible to minimize blasting at pit/quarry ARA-4 site. ▪ Where blasting is used, design blast patterns to minimize ground disturbance beyond the excavation area.
Effects to Terrain and Topography: Areas disturbed by the Project may cause erosion and sedimentation; changes to drainage patterns; decreased in slope stability, increase in of slumping; changes to vegetation composition; and visual changes to the landscape. **Proposed Mitigation Measures During Construction** ▪ Limiting disturbance footprint to the permanent development area and associated temporary supportive infrastructure during construction. ▪ The disturbed areas will be restored with native soils (removed or excavated in the same area) or materials that are more permeable than the native soils, where practical, and covered by native vegetation. ▪ Minimizing disturbance footprint to previously disturbed areas when completing decommissioning, restoration and cleanup activities during final close-out of the construction phase. ▪ Installing of drainage / equalization culverts along the east to west section of the road within the peatlands. ▪ Maintaining drainage in the work area to minimize ponding or channelization of surface flow. ▪ Re-contour, stabilize, and re-vegetate disturbed areas to suit original conditions and restore drainage patterns. ▪ Conduct progressive restoration activities throughout the construction phase. ▪ A Site Restoration and Monitoring Plan will be developed and implemented for the Project; this plan will focus on native species restoration on areas no longer required for project activities. ▪ An Erosion and Sediment Control Plan will be developed and implemented during construction.
Effects to Soil Quantity and Soil Quality: Project activities may cause loss of soil resources (quantity) or alteration to soil quality and could result in vegetation that shows stress, bare patches of soil where vegetation will not establish; soil compaction, rutting, and admixing; and the formation of erosion rills and gullies (water erosion); and excessive dust generation from wind erosion. **Proposed Mitigation Measure During Construction** ▪ Minimizing disturbance footprint to previously disturbed areas during decommissioning. ▪ Limiting disturbance footprint to the permanent development area and associated temporary supportive infrastructure during construction. ▪ Re-contour, stabilize, and re-vegetate disturbed areas to original conditions. ▪ An Erosion and Sediment Control Plan will be developed and implemented during construction. ▪ Implement mitigation measures for soil management, construction and grading. ▪ Disturbed areas will be restored with native soils (removed or excavated in the same area) or materials that are more permeable than the native soils, where practical, and covered by native vegetation. This can help restore or increase infiltration rates and groundwater levels and prevent or reduce soil erosion. ▪ Conduct progressive restoration activities throughout the construction phase. The following management plans will be developed and implemented for the Project: Soil Management Plan; Erosion and Sediment Control Plan; Site Restoration and Monitoring Plan; Construction Waste Management Plan; and Spill Prevention and Emergency Response Management Plan. **Mitigation Measures Applicable to Construction and Operations** ▪ No application of sand or salt is proposed for de-icing of the WSR during the winter season. ▪ Dust control measures will be implemented when deemed necessary. ▪ An ongoing follow-up monitoring program (post-construction) will be implemented during the operations phase of the Project. ▪ Prior to the development of quarry and pit sites the potential for ARD will be assessed. If the Project chooses to use materials or sites that are identified as having uncertain or known potential for ML/ARD, mitigative measures, sensitive receptor identification, and / or supplemental baseline studies will be completed in future

Project Effects and Key Mitigation Measures: Geology, Terrain, and Soils VC
development phases. Amongst other things, this may include infrastructure to divert or lower the water table, subdrains, and / or ongoing monitoring of surface and groundwater. ▪ The following management plans will be developed and implemented for the Project: Waste Management Plan; and Spill Prevention and Emergency Response Management Plan. This plan will lay out the requirements for training and procedures for the storage, handling, and transportation of potential contaminants, as well as equipment operation and maintenance intended to prevent spills from occurring. **Proposed Mitigation During Operations** • Limiting disturbance footprint to the permanent development area and associated temporary supportive infrastructure during construction. • Implement mitigation measures for soil management, construction and grading as identified above for construction phase. ▪ The following management plans will be developed and implemented for the Project: Spill Prevention and Emergency Response Management Plan; Soil Management Plan; and Air Quality and Dust Control Management Plan.

ES 8.1.4 Predicted Net Effects and Determination of Significance

There are predicted net adverse effects on the Geology, Terrain and Soils VC after the implementation of mitigation measures. These negative net effects are characterized as low to moderate in magnitude and likelihood of occurrence is “certain”. Details of the characterization of predicted net effects on the Geology, Terrain and Soils VC are presented in Section 6 of the EAR/IS.

All four net effects are considered to be not significant as widespread significant adverse environmental effects are not likely to occur on Geology, Terrain, and Soils as result of the Project and its activities.

ES 8.1.5 Cumulative Effects

The predicted net effects of the Project on the Geology, Terrain, and Soils VC that were carried forward for the assessment of cumulative effects include:

- Alteration of Geomorphology; Change in soil quality and quantity (i.e. loss of soil); and
- Change / alteration of terrain and topography.

The cumulative net adverse effects of the Project with other reasonably foreseeable developments (RFDs) and activities on the Geology, Terrian and Soils VC are predicted to be not significant. Further details on the results of the cumulative effects assessment for the Geology, Terrain, and Soils VC are presented in Section 21.

ES 8.1.6 Follow-up and Monitoring

The recommended monitoring program related to Geology, Terrain, and Soils VC are described as follows:

- Inspect active gravel and aggregate pit frequently for geology issues. Inspections are to be completed during rock excavation works during construction of the waterbody crossing structures.
- On-site construction monitoring will be required during clearing and soil salvaging activities to prevent unnecessary losses or contamination of soil resources.
- Conduct frequent inspections of required erosion and sediment control measures as required by the Erosion and Sediment Control Plan. Areas more susceptible to erosion should be monitored more frequently.
- During construction, conduct regular inspections of work areas to ensure that soil management and spill prevention mitigation measures are being implemented effectively.
- Following completion of construction work, post-construction inspections are recommended to ensure that soil conditions along the Project Footprint have been restored.

ES 8.2 Assessment of Effects on Surface Water Resources

ES 8.2.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Surface Water Resources VC, the following identified subcomponents for Surface Water Resources VC were examined in the assessment:

- Changes to Surface Water Quantity;
- Changes to Surface Water Quality; and
- Changes to Sediment Quality at Waterbodies.

ES 8.2.2 Existing Conditions Summary

Existing conditions for the Surface Water Resources VC were established through the field work programs, desktop studies and engagement and consultation activities completed by the Project Team. This includes, but not limited to, background information review, internet research, surface water and sediment sampling, hydrologic and hydraulic analysis, engagement with Indigenous communities and stakeholders, and expert opinion.

Baseline surface water and sediment quality sampling were conducted to establish existing surface water and sediment quality conditions at waterbody and watercourse crossings within the Local Study Area and along the route of the proposed WSR. Field surveys were also conducted to establish approximate channel bathymetry, surface water quality and sediment quality, and hydrological analysis, with the objective of addressing the requirements in Sections 8.6 and 14.2 of the federal TISG and meeting the Ontario requirements as identified in the ToR for the Project.

The existing conditions are being used as baseline conditions to assess and determine the potential effects of the Project. The existing conditions for surface water resources are described in detail in Appendix F – NEEC Report and are summarized in Section 7 of the EAR/IS.

ES 8.2.3 Potential Effects and Mitigation Measures

Project components and activities may cause potential effects on the Surface Water Resources VC. A summary of potential effects on surface water resources and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Surface Water Resources VC
Effects to Surface Water Quantity: The Project may cause changes to: stream discharge (variety of flow conditions including mean annual, monthly, and event based- discharges); channel hydraulics (flow depth / water level and velocity); erosion and sedimentation; and overland run-off drainage patterns. **Proposed Mitigation Measures During Construction** ▪ Waterbody crossings will be designed and constructed with single-span elements (bridges or culverts), where possible, to limit the encroachment of structures into stream channels and thereby minimize the effect on discharge under variable flow conditions. ▪ The disturbed areas from vegetation and clearing will be restored with native soils (removed or excavated in the same area) or materials that are more permeable than the native soils, where practical, and covered by native vegetation. This can help restore or increase infiltration rates and groundwater levels and prevent or reduce soil erosion. ▪ Erosion and sediment control measures (e.g. Ontario Construction Specifications for Temporary Erosion and Sediment Control Measures) will be incorporated into the detail design and implemented during construction to prevent erosion and migration of soils from the work site during rainfall events. ▪ The roadway and swales will be designed and constructed with consideration of low impact development procedures for linear infrastructure. These features may include permanent enhanced swales to treat, and attenuate stormwater run-off from the road. ▪ Cross-culverts will be installed at regular intervals based on local conditions and groundwater volumes and flows along the road (non-waterbody areas) within the lowlands / peatlands to convey surface drainage and movement subsurface groundwater flow through the road. **Proposed Mitigation Measures During Operations** ▪ The road cross-fall will be maintained during operations to drain water after deterioration of the loose gravel road surface until seasonal maintenance operations crews return to reshape the roadway. ▪ Cross-culverts at regular intervals along the road (non-waterbody areas) within the lowlands / peatlands will be maintained to convey surface drainage and movement of subsurface groundwater flow through the road.
Effects to Surface Water Quality: Project activities may cause adverse effects related to: concentration of suspended solids; concentration of chemical constituents; and increased erosion and sedimentation. **Proposed Mitigation Measures During Construction** ▪ Clearing and grubbing will be limited to the current work area and will not be done in phased manner as the road construction advances to limit potential erosion and sedimentation. ▪ Erosion and sediment control measures will be implemented during the construction of the road and all support infrastructure to prevent erosion and migration of soils from the work site during rainfall events. ▪ Construction will be delayed during heavy precipitation or run-off events. ▪ A Construction Waste Management Plan will be developed to manage and minimize the amount of the liquid and solid waste to be generated, by applying industry Best Management Practices including collection, storage. recycling and disposal.

Project Effects and Key Mitigation Measures: Surface Water Resources VC
▪ A Petroleum Handling and Storage Plan and Spill Prevention and Emergency Response Plan, as part of the CEMP, will be implemented to prevent accidental spills and leaks. This will include procedures for the proper handling and storage of petroleum and other hazardous materials and documentation of the incident and cleanup response. ▪ Water quality monitoring will be conducted to demonstrate that deleterious substances are not entering waterbodies or watercourses. Monitoring will be conducted as per Section 7.10 (Surface Water Follow-up and Monitoring), Section 22 (Follow Up and Compliance Monitoring), conditions of permits / approvals and as instructed by MNR and / or MECP, where applicable. **Proposed Mitigation Measures During Operations** ▪ The roadway and swales will be repaired and maintained with consideration of low impact development procedures for linear infrastructure in order to convey, treat, and attenuate stormwater run-off from the road. ▪ No application of sand or salt is proposed for de-icing of the WSR during the winter season. ▪ A Petroleum Handling and Storage Plan and Spill Prevention and Emergency Response Plan, as part of the OEMP, will be implemented. ▪ An ongoing follow-up monitoring program (post-construction) will be implemented during the operations phase of the Project to assess potential effects to water quality.
Effects to Sediment Quality at Waterbodies: The Project may cause effects to sediment quality from concentration of suspended solids; concentration of chemical constituents; and increased erosion and sedimentation. **Proposed Mitigation Measures During Construction and Operations** The key proposed mitigation measures to protect sediment quality at waterbodies are the same as those identified above for surface water quality during construction and operations of the Project.

ES 8.2.4 Predicted Net Effects and Determination of Significance

There are predicted net adverse effects on the Surface Water Resources VC after the implementation of mitigation measures. The adverse net effects to surface water quantity, surface water quality and sediment quality as result of the Project are all characterized as low in magnitude and the effects are considered to be not significant. Details of the characterization of predicted net effects on the Surface Water Resources VC, including the determination of significance, are presented in Section 7 of the EAR/IS.

ES 8.2.5 Cumulative Effects

The predicted net adverse effects of the Project on the Surface Water Resources VC that were carried forward for the assessment of cumulative effects include: change in surface water quantity; change in surface water quality; and change in sediment quality. The cumulative net effects of the Project with other RFDs and activities on the Surface Water VC are predicted to be not significant. Further details on the results of the cumulative effects assessment for the Surface Water Resources VC are presented in Section 21.

ES 8.2.6 Follow-up and Monitoring

The recommended monitoring program related to Surface Water Resources VC are described as follows:

- Qualified environmental inspector(s) and / or Indigenous monitors will be appointed to guide implementation, monitor, and report on the effectiveness of the construction procedures and mitigation measures.
- Surface water quality and sediment quality will be monitored, documented, and reported according to terms and conditions of the approved water taking permits and others permits, where applicable.
- Surface water sampling on a seasonal basis (e.g., spring, summer and fall) and sediment sampling on an annual basis are proposed at representative waterbody crossings. The monitoring and sampling programs will span pre-, during and post-construction periods (e.g., three years after construction is complete).

Further details on the proposed water quality monitoring programs are presented in Section 5.22 (Water Quality Monitoring) of Appendix E – Mitigation Measures.

ES 8.3 Assessment of Effects on Groundwater Resources

ES 8.3.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Groundwater Resources VC, the following identified subcomponents for Groundwater Resources VC were examined in the assessment:

- Changes to Groundwater Quantity; and
- Changes to Groundwater Quality.

ES 8.3.2 Existing Conditions Summary

Existing conditions for the Groundwater Resources VC were established through the field work programs, desktop studies and engagement and consultation activities completed by the Project Team. This includes, but not limited to, background information review, internet research, groundwater monitoring and sampling, hydraulic conductivity testing, engagement with Indigenous communities and stakeholders, and expert opinion. Methods used to characterize the existing groundwater conditions address the requirements in Sections 8.6 and Section 14.2 of the federal TISG and Ontario requirements as identified in the ToR for the Project. The desktop review focused on available published literature and existing geotechnical and hydrogeological reports; while field investigations consisted of drilling and installation of monitoring wells (including piezometers), well development, hydraulic conductivity testing, and seasonal groundwater monitoring and sampling.

The existing conditions are being used as baseline conditions to assess and determine the potential effects of the Project. The existing conditions for groundwater resources are described in detail in Appendix F – NEEC Report and are summarized in Section 8 of the EAR/IS.

ES 8.3.3 Potential Effects and Mitigation Measures

Project components and activities may cause potential effects on the Groundwater Resources VC. A summary of potential effects on groundwater resources and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Groundwater Resources VC

Effects to Groundwater Quantity: The Project may cause changes to groundwater level, permeability / hydraulic conductivity; groundwater infiltration rate; hydraulic gradient; and / or groundwater flow direction and pathway.

Proposed Mitigation Measures During Construction

- Disturbed areas will be restored with native soils (removed or excavated in the same area) or materials that are more permeable than the native soils, where practical, and covered by native vegetation. This can help restore or increase infiltration rates and groundwater levels and prevent or reduce soil erosion.
- The areas proposed for cut, excavation, and extraction (including pits and quarries) will be designed and developed as efficient as possible to limit the Project Footprint and potential groundwater effects. Appropriate restoration and reclamation measures will be adopted to restore the disturbed areas to the pre-development conditions as much as possible to reduce the project effects on groundwater infiltration and recharge.
- To avoid or reduce the road barrier effects in low-lying areas, such as the peatlands, with shallow water tables, the following measures will be considered during design and construction:
  - The materials selected for road construction, especially the portion below the existing ground surface/ groundwater table, will have the same or higher permeability compared to the surrounding native soils.
  - If needed, crushed stones (rockfill) and / or equalization culverts will be used at wetland and peatland crossings to maintain natural hydraulic connections between the upgradient and downgradient sides of the road to allow groundwater to flow naturally through the road.
  - When crossing wetlands and peatlands, the road design will consider consolidation and compression processes of the peat layers associated with road construction (loading), which may result in reduced permeability of the peat, and thus alter natural groundwater flow directions and pathways. Compression of peat could also have implications on water quality. Water quality will be monitored during and post road construction.
  - In cut areas, groundwater seepage (if any) can typically be controlled and managed through roadside drainage systems (e.g., roadside ditches).

Proposed Mitigation Measures During Construction and Operations

- The areas for temporary infrastructure (including access roads, construction camps, laydown and storage yards) will be designed and developed as efficient as possible to limit the Project Footprint and potential effects to groundwater. The machines and equipment used for site grading will be selected, where practicable, to minimize impacts on soil disturbing and ground hardening. Appropriate decommissioning and reclamation measures will be adopted to restore the disturbed areas to pre-development conditions as much as possible to reduce the project effects on groundwater infiltration and recharge.
- Blasting will only be used at places where other options are not practical. Wherever practical, alternatives including bedrock ripping, typical drilling, hammering, and non-explosive agent (e.g., expanding grout) will be considered. A Construction Blasting Management Plan for the Project will be prepared and implemented for blasting activities during construction and operations of the Project.
- Where blasting is required, it will be conducted in accordance with Ontario Provincial Standard Specifications (OPPS) 120 – General Specification for the Use of Explosive. A pre-blasting survey will be conducted to identify water supply wells and other environmentally sensitive features within 250 m from the blasting locations. Mitigation measures will be modified or enhanced, if needed, based on the survey results. Blasting will not be conducted within 50 m of water supply wells (if any) and should be avoided in shallow groundwater table areas, where possible.
- The dewatering and pumping activities will be regulated through permitting processes (e.g., Environmental Activity Sector Registration (EASR) and / or Permit to Take Water (PTTW)) to reduce the potential effects on groundwater resources. In addition, industry best management practices (BMP) will be used to minimize dewatering / pumping volumes.

Project Effects and Key Mitigation Measures: Groundwater Resources VC
Effects to Groundwater Quality: The Project and its related activities may cause changes to groundwater quality that could include: general chemistry (including pH); organic and inorganic parameters; nutrients; metals; and natural radionuclides. **Proposed Mitigation Measures During Construction and Operations** ▪ Blasting will be used at places where other options are not practical. Wherever practical, alternatives including bedrock ripping, typical or standard drilling, hammering, and non-explosive agent (e.g., expanding grout) will be considered. A Construction Blasting Management Plan for the Project will be prepared and implemented. ▪ Where blasting is required, it will be conducted in accordance with Ontario Provincial Standard Specifications (OPSS) 120 General Specification for the Use of Explosive, including conducting pre-blasting survey and applying setbacks from identified water supply wells and other environmentally sensitive features as specified under mitigation measures for effects to groundwater quantity. ▪ The areas proposed for extraction (including pits and quarries) and earth cut will be designed and developed as efficiently as possible to limit the Project Footprint. Appropriate restoration and reclamation measures will be adopted to restore the disturbed areas to pre-development conditions as much as possible to reduce the project effects on groundwater quality. ▪ Dewatering activities will, at a minimum, follow OPSS 517- Dewatering of Pipeline, Utility, and Associated Structure Excavation and OPSS 518 – Construction Specification for Control of Water from Dewatering Operations. ▪ Erosion and Sediment Control measures (e.g., OPSS 805, Construction Specification for Temporary Erosion and Sediment Control Measures) will be implemented during construction and operations to prevent erosion and migration of soils from the work site during rainfall events. ▪ Filter bag(s), and / or sediment trap, will be used at a minimum during dewatering for treatment of dewatering effluent. ▪ Discharge locations from dewatering activities will be at least 30 m away from waterbodies. ▪ A Construction Waste Management Plan will be developed for the management of waste products and how they are collected, stored, transported and disposed of in accordance with provincial and federal legislation and guidelines. ▪ A Petroleum Handling and Storage Plan and Spill Prevention and Emergency Response Plan will be implemented to prevent accidental spills and leaks. This will include procedures for the proper handling and storage of petroleum and other hazardous materials and documentation of the incident and cleanup response.

ES 8.3.4 Predicted Net Effects and Determination of Significance

There are predicted net adverse effects on the Groundwater Resources VC after the implementation of mitigation measures. The adverse net effects to groundwater quantity as result of the Project were characterized as low to moderate in magnitude; and for groundwater quality the effects were characterized as low in magnitude. Overall, the effects of the Project on groundwater resources are considered to be not significant. Details of the characterization of predicted net effects on the Groundwater Resources VC, including the determination of significance, are presented in Section 8 of the EAR/IS.

ES 8.3.5 Cumulative Effects

For the Groundwater Resources VC assessment, the net effects that are characterized as having a likelihood of occurrence of “probable” or “certain” and a “moderate” to “high” magnitude were carried forward to the cumulative effects assessment. As such, the predicted net effects on the Groundwater Resources VC that were carried forward for the assessment of cumulative effects include: change in groundwater quantity. The cumulative net adverse effects of the Project with other RFDs and activities on

the Groundwater Resources VC are predicted to be not significant. Further details on the results of the cumulative effects assessment for the Groundwater Resources VC are presented in Section 21.

ES 8.3.6 Follow-up and Monitoring

The recommended monitoring program related to the Groundwater Resources VC are described as follows:

- Conduct a pre-construction survey (e.g., prior to blasting, dewatering/pumping, etc.) of the identified private well on the Webequie First Nation Reserve lands. The well survey will include completion of well questionnaires to obtain baseline conditions about the well, and collection and analysis of water samples. The well water sampling will continue throughout the construction and post-construction periods on a seasonal basis (e.g., annual, or semi-annual sampling).
- Qualified environmental inspector(s) and / or Indigenous monitors will be appointed to guide implementation, monitor, and report on the effectiveness of the construction procedures and mitigation measures to protect and minimize effects to groundwater.
- Dewatering volumes and discharge water qualities will be monitored, documented, and reported according to terms and conditions of the approved water taking permit (e.g., PTTW or EASR) and others permits, if applicable.
- Groundwater level monitoring on a seasonal basis (e.g., spring, summer and fall) and groundwater sampling on an annual basis using available monitoring wells are proposed including piezometers installed in the peatland areas. The monitoring and sampling programs will span pre-, during and post-construction periods (e.g., three years after construction is complete).

ES 8.4 Assessment of Effects on Atmospheric Environment

ES 8.4.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Atmospheric Environment VC, the following identified subcomponents for Atmospheric Environment VC were examined in the assessment:

- Air quality: Qualitative and quantitative assessment of changes in ambient air quality for the following parameters including common air contaminants, toxic contaminants and greenhouse gases;
- Noise and vibration: Including absolute sound level and changes to sound levels (quantitative), overall sound levels during the daytime, night-time an overall “day-night” sound levels, maximum sound levels and potential construction vibration levels; and
- Lighting: Change in ambient light levels that would cause sensory disturbances.

ES 8.4.2 Existing Conditions Summary

To characterize and quantify the expected background concentrations of air contaminants within the air quality study area, the data of a combination of air quality monitoring stations in remote areas across Canada were used. Local air quality data are not available with the exception of limited data collected from a station operated by the MECP (2019) as part of Ontario's Ring of Fire Baseline Monitoring Program (2015-2018) providing data on fine particulate matter ($PM_{2.5}$) and metals which are excluded from this assessment. For the other contaminants, air quality monitoring stations located in remote areas similar to the Project were favoured to characterize and describe existing air quality conditions. Continuous and intermittent monitoring data were gathered from the National Air Pollution Surveillance Program (NAPS) and the Réseau de surveillance de la qualité de l'air du Québec (RSQAQ) for three recent and consecutive years (e.g., 2017-2019, where available).

Existing conditions for the atmospheric environment were established through the field work programs, desktop studies, and engagement and consultation activities completed by the Project Team. This includes, but not limited to, background information review, internet research, field measurements of sound levels, engagement with Indigenous communities and stakeholders, and expert opinion. The potential effects are identified in consideration of the existing conditions described in Appendix 6 – NEEC Report, the potential interactions with the Project, and the results of the following assessments:

- Air Quality Impact Assessment completed by AtkinsRéalis (Appendix G);
- Greenhouse Gas Emissions completed by AtkinsRéalis (Appendix H);
- Climate Change Resilience Review completed by AtkinsRéalis (Appendix I); and
- Noise and Vibration Impact Assessment completed by SLR Consulting Ltd. (Appendix J).

ES 8.4.3 Potential Effects and Mitigation Measures

Project components and activities may cause potential effects on the Atmospheric Environment VC. A summary of potential effects on the atmospheric environment and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures – Atmospheric Environment

Effects to Air Quality: Qualitative and quantitative assessments of changes in ambient air quality as a result of the Project were conducted. This included common air contaminants (SO_2, CO, and NO_2) and particulate matter (total suspended particulates [TSP], fine inhalable fraction of particulate matter PM_{10}, and fine particulate matter $PM_{2.5}$). as well as toxic contaminants: Relevant VOCs: 1,3-butadiene, acetaldehyde, acrolein, benzene, ethylbenzene, formaldehyde, hexanes, propionaldehyde, toluene, xylenes; Benzo(a)pyrene as a surrogate to polycyclic aromatic hydrocarbons (PAHs); Ground-level O_3; and Diesel particulate matter (DPM).

Proposed Mitigation Measures During Construction and Operations

- Use of water sprays from trucks to increase moisture levels in active areas during dry days (e.g., haul / access roads, temporary soil and aggregate stockpiles) to prevent dust.
- Use of environmentally certified equipment (e.g. Tier 4 engines) to minimize emissions.
- Use of dust suppression systems at quarries.
- Limiting vehicle speed.
- Limit vehicle and heavy equipment movement to designated areas.
- Use of efficient, lower-emission vehicles and equipment, where practical.
- Minimize idling of equipment and vehicles when possible.

Project Effects and Key Mitigation Measures – Atmospheric Environment
▪ Provide work crews with a training session on eco-driving to reduce fuel usage. ▪ An Air Quality and Dust Control Management Plan will be developed and implemented to mitigate the effects of construction activities on air quality. The plan will be adapted for continuation throughout the operations phase of the Project.
GHG Emissions: The Project will result in the emission of Greenhouse gases**:** (GHGs) / climate change: CO_2, CH_4, N_2O expressed as carbon dioxide equivalent (CO_2e) which quantifies GHG emissions in terms of their total global warming potential relative to that of CO_2. **Proposed Mitigation Measures During Construction and Operations** ▪ Implement proposed mitigation measures for air quality. ▪ Use biomass (removed due to vegetation clearing) for other purposes like the production of woodchips and erosion control. ▪ An Energy Management Plan will be developed and will include guidance to reduce operational GHG emissions associated with the MSF.
Noise: Changes to sound levels (quantitative) for Noise Sensitive Areas (NSA) are predicted as result of the Project. The assessment of effects included changes to: Overall sound levels during the daytime (L_d) (7 am to 11 pm) and night-time (L_n) (11 pm to 7 am) periods (dBA); Overall "day-night" sound levels over the entire day (L_{dn}) (dBA); Maximum sound levels from vehicle pass-by and the number of events during the night-time period (L_{max}) (10 pm to 7 am) (dBA); Change from existing "no-build" background sound levels, and the "future build" sound levels with the Project in-place (number of NSA with 0-5 dBA increase; and number of NSA with >5 dBA increase); Percent Highly Annoyed (%HA) at each NSA. **Proposed Mitigation Measures During Construction and Operations** ▪ Construction will be limited to the daytime period, where possible, especially near residences / receptors. ▪ Equipment will be properly maintained to limit noise emissions, including effective muffling devices that are in good working order. ▪ If noise complaints persist, construction equipment should be verified to comply with MOE NPC-115 guidelines. ▪ If noise complaints persist, and subject to the results of a field investigation, alternative noise control measures may be required, where reasonably available. In selecting appropriate noise control and mitigation measures, consideration should be given to the technical, administrative, and economic feasibility of the various alternatives. ▪ Use of appropriate personal protective equipment (including hearing protection) and coordinating the timing of blasting with the period of fewest on-site workers, when possible. ▪ A Construction Blasting Management Plan for the Project will be prepared and submitted by applicable contractor(s) after contract award and prior to initiation of blasting activities. ▪ A Noise and Vibration Management Plan will be developed and implemented to mitigate the effects of noise and vibration from construction activities. The plan will be adapted for continuation throughout the operations phase of the Project.
Vibration: Potential construction vibration levels (peak particle vibration velocity (PPV)) from blasting or pile driving at waterbody crossing locations may exceed federal and provincial limits / criteria. **Proposed Mitigation Measures During Construction** ▪ A Construction Blasting Management Plan for the Project will be prepared and submitted by applicable contractor(s) after contract award prior to initiation of blasting activities. ▪ Use of appropriate personal protective equipment (including hearing protection) and coordinating the timing of blasting with the period of fewest on-site workers, when possible. ▪ A Noise and Vibration Management Plan will be developed and implemented to mitigate the effects of noise and vibration from construction activities.

ES 8.4.4 Predicted Net Effects and Determination of Significance

There are predicted net adverse effects on the Atmospheric Environment VC after the implementation of mitigation measures. The adverse net effects resulting from changes in air quality as result of the Project were characterized as moderate to high in magnitude; and for changes in greenhouse gases were characterized as low in magnitude; and for changes in noise levels were characterized as low to moderate in magnitude. Overall, the net effects of the Project on the atmospheric environment are considered to be not significant. Details of the characterization of predicted net effects on the Atmospheric Environment VC, including the determination of significance, are presented in Section 9 of the EAR/IS.

ES 8.4.5 Cumulative Effects

For the Atmospheric Environment VC assessment, the net effects that are characterized as having a likelihood of occurrence of “probable” or “certain” and a “moderate” to “high” magnitude were carried forward to the cumulative effects assessment. As such, the predicted net effects on the Atmospheric Environment VC that were carried forward for the assessment of cumulative effects include: change in air quality during construction and operation phases; and change in sound levels during construction of the proposed roadway and waterbody crossings. Overall, the cumulative net adverse effects of the Project with other RFDs and activities on the Atmospheric Environment VC are predicted to be not significant. Further details on the results of the cumulative effects assessment on Atmospheric Environment VC are presented in Section 21.

ES 8.4.6 Follow-up and Monitoring

The recommended monitoring program related to the Atmospheric Environment VC Groundwater Resources VC are described as follows:

- **Air Quality:** An Air Quality and Dust Control Management Plan will be developed and implemented to manage and reduce air contaminant emissions during construction and operation phases. The Plan will integrate a monitoring procedure for dustfall effects and measures to control or limit particulate emissions that would mostly come from the passage of vehicles on the road or the handling of soil or aggregates by mobile equipment during construction.
- **Greenhouse Gases (GHGs):** Based on the results of the assessment, a GHG monitoring program is not recommended for the Project.
- **Noise and Vibration:** With the implementation of mitigation measures, the Project will result in construction and operation noise effects that are not expected to exceed guidance levels that require noise mitigation beyond best management practices outlined in Section 9.4.3. A noise monitoring program for construction and operations of the Project is not recommended. However, noise complaints, if arise, will be investigated and addressed. Vibration monitoring is expected to be required for aggregate extraction sites and general construction blasting activities to align with guidelines set out by MECP, MTO, Health Canada, Department of Fisheries and Oceans (DFO) and general industry practices, respectively. Monitoring requirements for construction blasting will be considered and assessed once detailed information regarding the blast designs are available.

ES 8.5 Assessment of Effects on Fish and Fish Habitat

ES 8.5.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Fish Habitat VC, the following identified subcomponents for Fish Habitat VC were examined in the assessment:

- Changes to Fish Habitat Quantity and Quality; and
- Change to Fish Populations.

ES 8.5.2 Existing Conditions Summary

Existing conditions for the Fish and Fish Habitat VC were established through the field work programs, desktop studies and engagement and consultation activities completed by the Project Team. This includes, but not limited to, background information review, internet research, fish habitat surveys, fish sampling, engagement with Indigenous communities and stakeholders, and expert opinion. Primary secondary information sources reviewed include: Draft Eagle's Nest Project Environment Impact Assessment and associated aquatic studies (Noront Resources Ltd); MECP Ring of Fire Baseline Data (MECP 2019a); Federal (DFO, Species at Risk Act [SARA], COSEWIC) and Provincial Databases and species lists (MECP, MNR); Committee on the Status of Endangered Wildlife in Canada (COSEWIC) reports and databases; Species at Risk in Ontario List; and Indigenous Knowledge received. Field assessments were conducted at large, medium-sized and small waterbodies or lotic habitat and also lakes / ponds or lentic habitat. Aerial assessments of waterbodies were conducted in areas where access was not safe or possible due to the difficult and wet terrain conditions.

The existing conditions are being used as baseline conditions to assess and determine the potential effects of the Project. The existing conditions for fish and fish habitat are described in detail in Appendix F– NEEC Report and are summarized in Section 10 of the EAR/IS.

ES 8.5.3 Potential Effects and Mitigation Measures

Project components and activities may cause potential effects on the Fish and Fish Habitat. A summary of potential effects on fish and fish habitat and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Fish and Fish Habitat VC
Effects to Fish Habitat Quantity and Quality: The Project and its activities have the potential to cause the destruction / loss and / or harmful alteration or disruption of fish habitat from a quantity and quality perspective. These specific changes could include: water quality guideline exceedances; changes to quality and quantity of aquatic instream habitat used by fish species (e.g., spawning and rearing areas, etc.); changes to quality and quantity of riparian habitat; changes to quality and quantity of habitat for fish food species (e.g., benthic invertebrates); and changes in fish access to habitats. **Proposed Mitigation Measures During Construction** ▪ Project Routing and Crossing Design to Avoid and Minimize Effects to Fish Habitat include:

Project Effects and Key Mitigation Measures: Fish and Fish Habitat VC

- The preferred route has been selected with consideration to minimize the number of waterbody crossings for the road, where feasible.
- Permanent culverts and bridge crossings have been designed to accommodate the existing bankfull channel width of a watercourse, preserving and minimizing impacts to fish habitat.
- For culverts (i.e., open bottom steel arch) at watercourse crossing locations, the design will include the infilling of the culvert with material (i.e., aggregate) that resembles the natural substrate present at the watercourse, as well as the creation of a low flow channel that mimics the existing stream channel.
- For larger waterbody crossings bridges have been selected for design and construction which are expected to reduce the total fish habitat loss.
- Culverts will be appropriately sized to allow for fish passage and will maintain the flow and water depth characteristics observed during existing conditions studies.
- Fish habitat delineation and mapping, and standards and specifications for protection of fish / fish habitat will be developed in the CEMP and OEMP for implementation to limit accidental disturbances (habitat loss) beyond the Project Footprint.

- Vegetation Clearing Standards and Best Management Practices to Limit Effects on Riparian and In-Water Habitat:
  - Clearing of riparian habitat will be minimized, where possible, as riparian habitat provides a buffer to fish habitat, regulates water levels, and controls erosion and sedimentation.
  - Vegetation removal within the ROW will be limited to the footprint of structures placed at water crossings and where feasible to retain a 30 m riparian buffer upstream and downstream of the structure crossings to limit habitat alteration and disruption.
  - Develop and implement a Vegetation and Invasive Species Management Plan detailing that includes details on vegetation restoration / reclamation and riparian area stabilization using native riparian / wetland seed mixes, if applicable, to stabilize soils / banks to pre-construction condition or better.
- An Erosion and Sediment Control (ESC) Plan will be developed and implemented to contain, manage site drainage and run-off.
- Habitat off-setting and enhancement will be implemented where the Project results in the harmful habitat alteration, disruption or destruction (HADD) of fish habitat or may cause death to fish, as defined under the Fisheries Act, and an authorization under Act is required.
- A Construction Environmental Management Plan, and subcomponent plans, will be development and implemented for the construction phase with procedures and protocols to avoid and reduce potential adverse effects.
- Standards and procedures for the storage, handling and stockpiling of non-hazardous materials will be established to reduce the potential for erosion and accidental deposition of materials that may impair surface water quality and impact fish or fish habitat.
- All vehicles and equipment will be stored at least 30 m from waterbodies and operated in a way that prevents the release of deleterious substances into a waterbody, irrespective of their fish-bearing status.
- Mitigation measures to prevent and respond to accidental spills and protect fish and fish habitat are described in Appendix E (Section 5.2 – Petroleum Handling and Storage, Section 5.3 – Spill Prevention and Emergency Response, Section 5.5 – Material Handling and Storage, Section 5-17 Concrete Washout Management Practices). A Spill Prevention and Emergency Response Management Plan will be developed and implemented during construction.
- All dewatering activities will be conducted in compliance with the Ontario Provincial Standard Specification (OPSS) 517 – Construction Specifications for Control of Water from Dewatering Operations, and OPSS 518 – Construction Specification for Dewatering of Pipeline, Utility, and Associated Structure Excavation.

Proposed Mitigation Measures During Operations

- The key proposed mitigation measures to protect fish and fish habitat during the operations phase are the same as those identified above for the construction phase. An additional notable mitigation measures during operations phase include: culvert maintenance and monitoring to avoid the introduction of obstructions or barriers to fish passage. This will include, but not limited to, regularly monitoring and maintaining culverts to allow for fish passage. Debris removal activities will follow DFO's Code of Practice: Culvert Maintenance (2023) (i.e., gradual removal such that flooding downstream, extreme flows downstream, release of suspended sediment, and avoidance of fish stranding).

Project Effects and Key Mitigation Measures: Fish and Fish Habitat VC
Effects to Fish Populations: The Project has the potential to result in changes to fish abundance; fish distribution; fish mortality and / or injury; and quality and quantity of food species (e.g., benthic invertebrate abundance and diversity). **Proposed Mitigation Measures During Construction** ▪ Where blasting in or near water is proposed to support road construction or in bedrock for aggregate mitigation measures will be implemented to reduce the potential for injury / death of fish, such as: ▫ General avoidance measures like reducing the risk of fish death by applying restricted activity periods (timing windows) unless specific approvals have been granted by regulatory agencies, conducting fish rescues / relocations and avoiding blasting in or near water, unless absolutely necessary. ▫ Following the DFO Blasting Guidance (Wright and Hopky, 2008) and Ontario Provincial Standard Specification 120 General Specifications for the Use of Explosives (Ontario Provincial Standards 2019). ▪ Activities with the potential to impact fish and fish habitat (e.g., in-water work) or cause risk of injury/death to fish during the construction and operation phases of the Project will be conducted within the appropriate restricted activity period or commonly referred to as in-water timing window, as determined by the MNR and DFO. ▪ To complete in-water works associated with waterbody crossings, isolation of the work site and fish rescue operations will be conducted to avoid injury or death of fish. Fish within the isolated workspaces will be rescued (i.e., salvaged and relocated) by qualified professionals under the conditions of a MNR License to Collect Fish for Scientific Purposes to be acquired, and in accordance with requirements in the DFO Interim Standard for In-water Site Isolation. ▪ Employees or visitors on-site in temporary construction camps or at the permanent maintenance and storage facility will be prohibited from hunting, fishing, or harvesting wildlife. ▪ Wildlife orientation and education programs will be delivered on-site to inform personnel about best environmental practices for fish and wildlife in the area. ▪ Public access restrictions will be implemented to reduce access to waterbodies and limit the potential increase in fish harvesting. **Proposed Mitigation Measures During Operations** The key proposed mitigation measures to protect and avoid adverse impacts to fish populations during the operations phase are the same as those identified above for the construction phase.

ES 8.5.4 Predicted Net Effects and Determination of Significance

There are predicted net adverse effects on the Fish and Fish Habitat VC during construction phase and to a lesser extent during the operations phase of the Project. These effects include habitat loss, harmful alteration and disruption of habitat, changes in fish access, injury or death of fish, and increased harvest due to improved access.

During the construction phase, adverse effects are primarily associated with the placement of infrastructure at waterbody crossings, material placement, vegetation removal, and changes in hydrology and water quality. These effects are generally of low magnitude, occur infrequently, and are reversible, with the exception of potential fish injury or death, which is irreversible but of negligible magnitude. The likelihood of occurrence is certain or probable, and the affected fish populations are considered resilient.

During the operations phase, similar adverse effects persist, including habitat disruption from road maintenance, continued changes in hydrology and water quality, and increased public access leading to higher harvest pressure. These effects are considered to be low to negligible magnitude, generally reversible, and occur infrequently, with the exception of increased harvest, which is moderate in magnitude and with a likelihood of occurrence ranging from possible to probable.

Overall, the predicted net effects on the Fish and Fish Habitat VC are considered not significant after the implementation of mitigation measures. Details of the characterization of predicted net effects on the Fish and Fish Habitat VC, including the determination of significance, are presented in Section 13 of the EAR/IS.

ES 8.5.5 Cumulative Effects

For this Fish and Fish Habitat VC assessment, the net effects that are characterized as having a likelihood of occurrence of “probable” or “certain” and a “moderate” to “high” magnitude were carried forward to the cumulative effects assessment.

The predicted net effects of the Project on the Fish and Fish Habitat VC that were carried forward for the assessment of cumulative effects within the Fish and Fish Habitat Regional Study Area include:

- Changes to Quantity and Quality of Fish Habitat:
  - Changes to fish access to habitats (during operations phase).
- Changes to Fish Populations:
  - Changes to public access resulting in increased harvest of fish (during operations phase).

The cumulative net adverse effects of the Project with other RFDs and activities on the Fish and Fish Habitat VC are predicted to be not significant. Further details on the results of the cumulative effects assessment for the Groundwater Resources VC are presented in Section 21.

ES 8.5.6 Follow-up and Monitoring:

The recommended monitoring program related to Fish and Fish Habitat VC will include:

- Environmental Monitors present on-site before and during construction activities.
- Regular inspections and monitoring of installed ESC measures to ensure they are effective and identify corrective action, where applicable.
- Culvert monitoring programs to remove debris, prevent fish passage interruptions, and assess blockages and / or ponding.
- Monitoring streamflow, turbidity, total suspended solids and other related water quality parameters during construction to confirm effectiveness of ESC measures.
- Periodic fish community and habitat surveys to detect changes in fish assemblages.
- Pre- and post-construction downstream fish habitat assessments to evaluate habitat alterations, including monitoring changes to stream morphology and substrate caused by increased sediment loads or changes in streamflow.

Where a DFO Fisheries Act authorization is required, a qualified fisheries specialist will also conduct the following construction monitoring tasks, in addition to the conditions specified in the authorization:

- Review existing plans for the Project, including but not limited to, ESC plans, temporary flow management, dewatering plans and environmental management plans, to ensure these are being followed with the appropriate measures in-place.

- Confirm the mitigation measures identified in the EA/IA are being installed / implemented and maintained as designed including providing field advice and necessary corrective actions for non-compliance, and documents whether these measures are protecting fish and fish habitat effectively throughout construction.
- Undertake monitoring of off-setting measures outlined in the authorization, including that off-setting measures were constructed as designed.
- Undertake post-construction monitoring and prepare annual reporting to confirm that the off-setting measures are functioning as designed and successful in providing fish habitat.

ES 8.6 Assessment of Effects on Vegetation and Wetlands

ES 8.6.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Vegetation and Wetlands VC, the following identified subcomponents for Vegetation and Wetlands VC were examined in the assessment:

- Vegetation Communities, Species and Biodiversity;
- Wetland Functions;
- Plant Species and Communities at Risk, of Conservation Concern, or Locally Rare; and
- Plant Species and Communities of Traditional Importance to Indigenous Peoples.

ES 8.6.2 Existing Conditions Summary

Background information was reviewed from a variety of sources including publicly available data sets, relevant legislation, field guides, technical manuals, previous studies, and peer-reviewed publications. In addition, Indigenous Knowledge obtained from Webequie First Nation and other First Nations provided information on traditional use of plants in the project area. Datasets from both the Land Information Ontario (LIO) and the Far North Land Cover (FNLC) were used to characterize vegetation and wetlands, but when discrepancies were identified, the LIO data took precedence due to its increased accuracy. In addition, aerial imagery, LiDAR, and background data collected from existing topographic and geological data sources were examined. Modelling of vegetation was rejected in favour of visual delineation and typing of vegetation communities by experienced biologists conducting the field programs, or with extensive experience typing vegetation in the region. Background data sources and the results from field surveys were extrapolated to delineate vegetation units using an iterative approach. The results of the baseline studies are provided in Appendix F – NEEC Report.

ES 8.6.3 Potential Effects and Mitigation Measures

Project components and activities may cause potential effects on the Vegetation and Wetlands VC. A summary of potential effects on the vegetation and wetlands and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Vegetation and Wetlands VC

Effects on Vegetation Communities, Species and Biodiversity: The Project has the potential to cause: direct loss of upland, wetland and riparian species, vegetation communities (assemblages); fragmentation of vegetation communities; alterations to community biodiversity; and vegetation die-off or community alterations outside of the Project clearing limits.

Proposed Key Mitigation Measures During Construction and Operations

- Project Planning and Design:
  - Where possible, flexibility in design standards has been applied to reduce Project Footprint and removals requirements (e.g., limit size of in roadside ditches).
  - New bridges and culverts at waterbody crossing have been designed at right angles where possible to reduce the footprint of the structures and thereby limit the vegetation removals required in riparian areas.
  - Equalization culverts will be in wetland / peatland areas of the road at intervals of 100 m to 250 m to maintain or enhance hydraulic connections between the upgradient and downgradient sides of the road, allow for groundwater to flow naturally through the road and to prevent adverse effects to vegetation.
  - Clearing activities at wetland / peatland areas will be planned to occur during the winter, where possible, to avoid unnecessary disturbance of soils and vegetations as well as minimize compaction of soils.
- Vegetation clearing and grubbing standards and procedures:
  - Clearing and grubbing will be limited to the permanent development area and associated temporary supportive infrastructure during construction (i.e., access roads, camps, aggregate areas) and those areas within road ROW requiring vegetation management during operation of the Project.
  - All areas with the potential for presence of rare plant species will be surveyed for occurrences prior to removals, and any rare specimens identified will be transplanted by qualified personnel prior to clearing.
  - Clearing and grubbing will be progressively completed as road construction activities are advanced, where practicable, to limit erosion and sedimentation.
- Erosion and sediment control:
  - Ensure procedures outlined in the ESC Plan will be adhered to control run-off, minimize erosion on exposed slopes and substrates, and prevent introduction of sediment or other deleterious materials from entering into vegetation assemblages.
  - ESC measures will be inspected by the proponent's Contractor on a regular basis and after every major rain or spring melt event; and necessary repairs will be made immediately after deficiencies are identified.
- Waste and hazardous materials transportation, storage and handling standards and procedures:
  - Procedures for the transportation, storage, and handling chemicals and fuels will be implemented for the Project to avoid spills or release of contaminants to the environment and will be included in the Waste Management Plan and Fuel Storage and Handling Plan for construction and operations as part of the CEMP and OEMP.
  - All employees involved in the handling and storage of fuels and hazardous materials will be qualified to handle these materials and have a Workplace Hazardous Materials Information System (WHMIS) training.
  - Designated fuel storage areas will be established at temporary construction camps and permanent MSF, with barricaded double-walled above-ground storage tanks or other suitable fuel tanks with secondary containment measures (e.g., berm system) for safety. Waste and fuel storage areas will be located at construction camps and at the MSF during operations phase.
  - Equipment with reduced mobility, such as heavy lift cranes and excavators, will have fuel delivered by a mobile tank and re-fuelling will take place on-site, following safety procedures. Where fuelling of vehicles and other mobile or heavy equipment is required at sites along the road then fuelling will not be permitted within 50 m of a permanent waterbody.
- An Air Quality and Dust Control Management Plan will be prepared and implemented to control dust, air emission and subsequent deposition that may harm vegetation. Key standards and procedures are outlined in **Section ES 8.4** (Atmospheric Environment) and include use of water sprays from trucks to increase moisture levels in active areas during dry days (e.g., haul / access roads, temporary soil and aggregate stockpiles) to prevent dust.

Project Effects and Key Mitigation Measures: Vegetation and Wetlands VC
▪ A Vegetation and Invasive Species Management Plan will be prepared and implemented to prevent the introduction and spread of invasive species which can disrupt plant communities and decrease habitat quality by affecting plant community structure and species diversity directly through competition. Procedures for example will include: that all construction equipment and vehicles that arrive on the site will be visually inspected to confirm they are in clean condition, free of mud and debris that could harbor seeds of invasive vegetation species; and that education and training programs will be implemented to familiarize workers with potential invasive species, with associated reporting procedures. ▪ Restoration and Habitat Off-setting: ▫ Restoration / reclamation and cleanup activities will occur progressively throughout the construction of the Project. Typical activities with include removing refuse, grading disturbed areas, contouring disturbed slopes to a stable profile, re-establishing natural drainage patterns and seeding/planting to re-establish vegetation. Where tree and/or shrub planting is required to adequately rehabilitate temporarily disturbed sites in sensitive areas (e.g., peatlands), appropriate native species will be used. ▫ For permanent losses to upland, wetland and riparian areas, it is proposed that an Ecological Restoration Plan be developed in consultation with First Nations, federal and provincial agencies, and stakeholders with the goal of providing in-kind compensation for the loss of vegetation classes as a result of the Project. The approach for the proposed vegetation and wetland habitat off-setting program is further outlined in Section 11.4.5 and Appendix K-3.
Effects in Wetland Functions: The Project and associated activities have the potential to result in the loss or alteration of the geophysical, biophysical, and socio-economic functions of wetlands. **Proposed Mitigation Measures During Construction and Operations** The key proposed mitigation measures to address to potential effects to wetland function are the same as those identified above for effects on vegetation communities, species and biodiversity. One notable exception is the proposed implementation of Wetland Function Monitoring Program that will be based on a detailed Level 3 Wetland Functions Assessment protocol designed to capture various observable wetland functions through detailed field observations on hydrologic and hydrogeologic, soils, water quality, vegetation, and wildlife characteristic with the objective to verify and confirm predicted net effects to wetland functions (refer to Appendix K-4).
Effects to Plant Species and Communities at Risk, of Conservation Concern, or Locally Rare: The Project has the potential to result in the loss or alteration of plant species and communities of conservation concern. **Proposed Mitigation Measures During Construction and Operations** The key proposed mitigation measures to address to potential effects to plant species and communities at risk, of conservation concern, or locally rare are the same as those identified above for effects on vegetation communities, species and biodiversity.
Effect to Plant Species and Communities of Traditional Importance to Indigenous Peoples: Loss or alteration of plant species and communities of traditional importance to Indigenous Peoples for cultural or medicinal purposes or as a source of country foods. **Proposed Mitigation Measures During Construction and Operations** The key proposed mitigation measures to address to potential effects to plant species and communities of traditional importance to Indigenous Peoples are the same as those identified above for effects on vegetation communities, species and biodiversity.

ES 8.6.4 Predicted Net Effects and Determination of Significance

There are predicted net adverse effects on the Vegetation and Wetlands VC after the implementation of mitigation measures. The predicted net effects include:

- Loss or alteration of upland, wetland and riparian vegetation communities, species and biodiversity;
- Loss or alteration of wetland functions;

- Loss or alteration of locally rare vegetation communities considered of conservation concern; and
- Loss or alteration plant species and communities of traditional importance to Indigenous Peoples.

The direct losses or alterations to vegetation communities are limited to the construction period during the clearing, grubbing and grading activities for the Project. The net direct losses of vegetation occur within the Project Footprint, and community and species diversity are predicted to remain relatively unchanged in the Local Study Area (LSA) and Regional Study Area (RSA). The net effects are characterized as negligible in magnitude and are irreversible. The vegetation losses from the Project represent less than 6.5% of the respective availability of vegetation classes within the LSA, and less than one percent in the RSA.

There are some negative changes to the function of various wetlands within close proximity to the road are expected via potential indirect effects (i.e., potential changes to water regimes, invasive species, sediment deposition, spills etc.). Though largely mitigated, the indirect effects that do remain are predicted to be localized to within 60 m of the Project Footprint for swamps, and 250 m for open wetlands. Based on modelling conducted the predicted changes to wetland functions in the LSA and RSA are considered negligible in magnitude of effect.

There will be net direct losses of two locally rare vegetation communities (Hardwood and Mixedwood Forest) vegetation assemblages within the Project Footprint. The removals of the locally rare vegetation communities represent 3.13% (Hardwood) and 3.32% (Mixedwood) of these vegetation types found within the LSA and 0.85% and 1.24% respectively within the RSA. The net effects are considered to be of negligible magnitude, and potentially reversible after completion of proposed vegetation restoration and off-setting / compensation.

Areas identified as sensitive or of traditional importance be indigenous Peoples will experience minimal impacts and are limited to areas described as a Juniper source near the ARA-4 aggregate source site, and various portage or historic travel route areas. Juniper is a very common plant throughout the upland vegetation classes within the study area and overall, the net effects are characterized as negligible in magnitude.

Overall, the predicted net effects on the Vegetation and Wetlands VC are considered not significant after the implementation of mitigation measures. Details of the characterization of predicted net effects on the Vegetation and Wetlands VC, including the determination of significance, are presented in Section 11 of the EAR/IS.

ES 8.6.5 Cumulative Effects

For the Vegetation and Wetlands VC assessment, the net effects that are characterized as having a likelihood of occurrence of “probable” or “certain” and a “low” to “high” magnitude were set as the criteria for being carried forward to the cumulative effects assessment. Although the Vegetation and Wetlands VC net effects do not meet the criteria regarding magnitude to be carried forward to the cumulative effects assessment, the net effects to the VC do overlap spatially with other past, present and reasonably foreseeable developments or physical activities. Therefore, based on the temporal and spatial overlaps and expressed concerns of Indigenous communities received during engagement and consultation (i.e., effects to peatlands), the subcomponents of the Vegetation and Wetlands VC that were carried forward to the assessment of cumulative effects include:

- Loss or alteration of upland, wetland and riparian vegetation communities, species and biodiversity;

- Loss or alteration of wetland functions;
- Loss or alteration of species at risk plants and species of conservation concern; and
- Loss or alteration plant species and communities of traditional importance to Indigenous Peoples for cultural or medicinal purposes or as a source of country foods.

The cumulative net adverse effects of the Project with other RFDs and activities on the Vegetation and Wetlands VC are predicted to be not significant. Further details on the results of the cumulative effects assessment for the Vegetation and Wetlands VC are presented in Section 21.

ES 8.6.6 Follow-up and Monitoring

The recommended monitoring program elements related to the Vegetation and Wetlands VC are summarized as follows:

- Qualified environmental inspector(s) and / or Indigenous environmental monitors will be appointed to guide implementation, monitor, and report on the effectiveness of the construction procedures and mitigation measures.
- Following construction of the Project, annual reports documenting the recommended long-term restoration and monitoring programs will be submitted to appropriate regulatory agencies by qualified professional and will also be provided to interested First Nations for feedback.
- A dedicated Wetlands Function Monitoring Program will be developed and implemented. Details of this proposed program are presented in Appendix K-4.
- A Vegetation and Wetlands Off-Setting (compensation) Program will be developed and implemented in accordance with the methodologies outlined in Sections 11.4.5 and Appendix K-3.
- Modifications to restoration and monitoring programs, including adaptive management actions will be implemented by the proponent, if the annual reporting identify deficiencies are occurring.
- For the life of the Project, if additional, unpredicted, Project related impacts are occurring to vegetation, wetlands, swift remedial action will be undertaken by the proponent, aided by qualified professionals.

ES 8.7 Assessment of Effects on Wildlife and Wildlife Habitat

ES 8.7.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Wildlife and Wildlife Habitat VC, the following identified subcomponents for Wildlife and Wildlife Habitat VC were examined in the assessment:

- Wildlife Habitat;
- Wildlife Habitat Loss;
- Wildlife Habitat Alteration or Degradation;
- Wildlife Populations;
- Alteration in Wildlife Movement; and
- Wildlife Injury or Death.

ES 8.7.2 Existing Conditions Summary

Existing conditions for the Wildlife and Wildlife Habitat VC were established through the field work programs, review of publicly available data sets and studies, feedback from consultation activities and Indigenous Knowledge. Wildlife surveys were conducted between 2018 and 2023 and included: winter aerial tracking surveys; breeding bird point count surveys, three-season bird acoustic surveys, aerial waterfowl and shorebird migration surveys, bat habitat assessment, and bat acoustic surveys.

The objectives of the baseline study were to identify and characterize the wildlife of ecological, economic, or human importance (particularly to Indigenous Peoples) within the Project area as well as to identify important terrestrial features related to wildlife usage, critical life-cycle activities, and issues, including:

- Identify wildlife species and / or communities / guilds;
- Identify the presence, distribution, and abundance of terrestrial wildlife occurring within the project areas;
- Identify and characterize provincially significant terrestrial wildlife habitat within the project areas;
- Identify and characterize critical habitat for provincial and federal species at risk (SAR); and
- Support the determination of habitat of species of special concern.

The results of the wildlife baseline studies are provided in Appendix F – NEEC Report.

The assessment of effects on wildlife SAR and their habitat and the data collected for these species are summarized and presented separately in **Section ES 8.8** and are detailed in Section 13.

ES 8.7.3 Potential Effects and Mitigation Measures

Project components and activities may cause potential effects on the habitat and populations of moose, furbearers, bats, all birds, reptiles and amphibians. A summary of potential effects on the Wildlife and Wildlife Habitat VC and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

ES 8.7.3.1 Moose

Project Effects and Key Mitigation Measures: Moose
Moose: Project effects include: ▪ Wildlife Habitat Loss / Destruction; Wildlife Habitat Alteration / Degradation; Alteration in Wildlife Movement and; Wildlife Injury / Death. ▪ Changes to Moose habitat availability; Changes to abundance and distribution of moose and moose habitat; Changes to moose survival and reproduction; Changes to predator access, habitat use and population. **Proposed Mitigation Measures During Construction** ▪ Identified areas of critical Moose habitat were avoided, where feasible as part of the evaluation of route alternatives. ▪ Minimize the extent of clearing, or habitat loss, for the road, quarries / pits and other temporary areas (e.g., construction camps). ▪ Clearly delineate the boundaries of the work zone to prevent habitat destruction beyond the established work limits. ▪ Temporary supportive infrastructure such as access roads, aggregate pits / quarries, construction camps, waterbody crossings, and laydown areas will be reclaimed at the end of construction.

Project Effects and Key Mitigation Measures: Moose

Proposed Mitigation Measures During Construction and Operations

- Keep construction footprints as small as possible and minimize / restrict clearing near sensitive Moose habitat areas.
- Progressively reclaim areas in a timely manner with native vegetation using plantings and seeding.
- Blasting will be conducted will adhere to the restrictive activity periods and / or timing windows recommended by the MNR and Environment and Climate Change Canada (ECCC). For example, in Ontario calving season for Moose occurs from late May to early July. During this period, Moose cows are highly sensitive to disturbance. Between December and March, Moose rely on specific habitats for shelter and food. As such, vegetation clearing in such habitats should be avoided.
- If adherence to the timing windows and restrictions is not possible, the Proponent's Contractor will develop site-specific mitigation and monitoring in consultation with appropriate regulatory agencies (e.g., MNR, ECCC).
- Implement mitigation measures outlined in mitigation plans for noise, light, and vibration, including maintenance of equipment.
- Maintain vegetation protection zones (i.e., buffers / setbacks) to reduce sensory impacts.
- Temporary and permanent waterbody crossings will be designed and constructed to accommodate anticipated water flows during their lifespan.
- Cross-culverts will be installed at regular intervals in lowland areas to prevent water from ponding on either side of the roadway and associated effects to habitat.
- Implement procedures for the storage, handling and setbacks for hazardous materials, including providing adequate training of workers in hazardous material handling.
- Ensure equipment has air and noise emission pollution control mechanisms in good working order.
- Ensure emergency spill response equipment and material are available and maintained at all construction sites.
- Ensure all equipment and vehicles are clean when arriving on-site to prevent introduction of invasive plant species.
- Use native plants for site restoration of disturbed areas.
- Construction areas should leave breaks to allow for wildlife passage / movement.
- Snow clearing during operations should ensure breaks are left for wildlife passage.
- Restrict public access to road during construction to avoid increase in hunting.
- Prohibit firearms in camps and construction areas.
- Limit designated rest and maintenance turnaround areas along road.
- Speed limits for construction vehicles will be enforced on the road ROW, camps and access roads.
- Provide line of sight along roadways through design of road to minimize wildlife mortality from vehicle collisions.
- Movement corridors for Moose will be identified, signage and reduced speeds posted.
- Reclamation / blockage of any temporarily disturbed areas and access roads.
- Clear vegetation within the ROW as part of routine activities during the operations phase to reduce attractants for moose and other ungulates.
- Quickly remove roadkill to reduce predator attractants.

ES 8.7.3.2 Furbearers

Project Effects and Key Mitigation Measures: Furbearers

Furbearers: Project effects include: Wildlife Habitat Loss / Destruction; Wildlife Habitat Alteration / Degradation; Alteration in Wildlife Movement and; Wildlife Injury / Death.

- Changes to American Marten habitat availability; Changes to abundance and distribution of American Marten and American Marten habitat; Changes to American Marten survival and reproduction.
- Changes to Beaver habitat availability; Changes to abundance and distribution of beaver and beaver habitat; Changes to beaver survival and reproduction.
- Changes to furbearer species richness; Changes to predator access, habitat use and population.

Proposed Mitigation Measures During Construction

- Construction areas should leave breaks to allow for passage of furbearers and other wildlife.
- Snow clearing should ensure breaks are left for wildlife passage.
- In-water works for construction of structures should minimize footprint and duration activities that may disrupt wildlife.
- Speed limits for construction vehicles will be enforced on the road ROW, camps and access roads.
- Restricted access to the road during construction will be maintained.
- Reclamation / blockage of any temporarily disturbed areas and access roads.
- Delineate the boundaries of the work areas to prevent habitat damage and destruction beyond the limits of the work area.
- Training of personnel to identify occupied dens and lodges.
- Vegetation clearing near watercourses will be conducted outside the breeding period for American Marten. In northern and central Ontario, the breeding season for this species typically occurs in late July or early August. After mating, the gestation period is approximately 8.5 months.
- Vegetation clearing in suitable American Marten denning habitat will be conducted outside of the period of late March to early May. This is the period in which female American Marten will give birth to kits.
- Blasting will be conducted outside of these sensitive life-cycle periods.
- Dam clearing will not take place during frozen conditions.
- No construction activities that cause loud noise and / or vibration will take place within 500 m of any occupied den or lodge during the breeding period. In northern and central Ontario, the breeding season for beavers typically extends between January and March, with kits being born between May and July.
- Clearly delineate the boundaries for vegetation removal and management to prevent habitat destruction beyond these limits.

Proposed Mitigation Measures During Construction and Operations

- Avoid identified areas of critical furbearer habitat, where feasible.
- Minimize the extent of clearings at pits / quarries and other temporary supportive infrastructure areas.
- Keep construction footprints as small as possible and minimize / restrict clearing near sensitive areas.
- Reclaim areas quickly with natural vegetation augmented by planting and seeding.
- Blasting will be conducted outside sensitive windows, including the breeding and denning seasons for American Marten (late July / early August for breeding and late March-early May for denning), and Beaver (breeding: January-March, followed by a gestation period of approximately 100 days), unless specific approvals have been granted by regulatory agencies.
- Restrict blasting to timing “windows” for the protection of aquatic and wildlife species and blast operations, where applicable, will be carried out in accordance with DFO guidelines and Ontario Provincial Standard Specification 120 General Specification for the Use of Explosives.
- Enforce speed limits for vehicles and prohibit recreational use of all-terrain vehicles by Project personnel.
- Noise abatement equipment on machinery will be properly maintained and in good working order.
- Limit construction activities to occur during one 12-hour shift per day, with normal working hours of 07:00 to 19:00.
- Vegetation buffers should be maintained around sensitive habitats to reduce sensory impacts.

Project Effects and Key Mitigation Measures: Furbearers
▪ Prepare and implement Light Management Plan, Air Quality and Dust Control Management Plan; Noise and Vibration Plan; Construction Blasting Management Plan; and Spill Prevention and Emergency Response Management Plan. ▪ Implement procedures for the storage, handling and setbacks for hazardous materials. ▪ Ensure equipment has emission pollution control mechanisms for air and noise are in good working order. ▪ Ensure emergency spill response equipment is available and maintained at all construction sites. ▪ Temporary water crossings will be designed to accommodate anticipated water flows during their lifespan. ▪ Cross-culverts will be installed at regular intervals in lowland areas to prevent water from ponding on either side of the roadway. ▪ Road maintenance activities are to regularly check culverts and other crossings for blockages. ▪ See Section 7 (Surface Water) and Section 8 (Groundwater) for detailed mitigation measures. ▪ Ensure all equipment and vehicles are clean when arriving on-site to prevent introduction of invasives species. ▪ Use native plants in all restoration activities. ▪ Limit the designated rest and maintenance areas s along road to minimize public access. ▪ Implement mitigation measures outlined in mitigation plans for noise and light. ▪ Maintain vegetation barrier to reduce sensory impacts. ▪ Restrict public access to road during construction. ▪ Prohibit firearms in construction camps and construction staff hunting or trapping during the construction phase. ▪ Limit designated rest and maintenance turnaround areas along road to minimize public access opportunities. ▪ Block and reclaim areas quickly with natural vegetation augmented by planting and seeding. **Proposed Mitigation Measures During Operations** ▪ Maintain line of sight along roadways to minimize potential in injury / death from vehicle collisions. ▪ Post and enforce speed limits on proponent-controlled sections of road. ▪ Movement corridors for wildlife will be identified, signage and reduced speeds posted. ▪ Removal of any roadkill that may act as an attractant for furbearers and / or to reduce predator attractants. ▪ Training of operations personnel to identify occupied dens and lodges.

ES 8.7.3.3 Bats

Project Effects and Key Mitigation Measures: Bats
Bats: Project effects include: Wildlife Habitat Loss / Destruction; Wildlife Habitat Alteration / Degradation; Alteration in Wildlife Movement and; Wildlife Injury / Death. ▪ Changes to bat habitat availability (quantity – hectare). ▪ Changes to abundance and distribution of bats and bat habitat (number / ha). ▪ Changes to bat habitat availability (quality). ▪ Changes to bat survival and reproduction. ▪ Changes in bat mortality. **Proposed Mitigation Measures During Construction** ▪ Maintain moisture regimes in groundwater recharge areas near any identified maternity roosting habitat. ▪ Keep construction footprints as small as possible and minimize / restrict clearing near sensitive areas. **Proposed Mitigation Measures During Construction and Operations** ▪ Suitable maternity roosting habitat (upland area) has been avoided, where practicable, as part of the evaluation of route alternatives. ▪ Maintain protective forest cover leading to any identified maternity roosting habitat.

Project Effects and Key Mitigation Measures: Bats
▪ Minimizing the extent of clearings at quarries / pits and other temporary areas. ▪ Clearly delineate the boundaries of the work areas (e.g., vegetation clearing) to prevent habitat destruction beyond the limits of the work area. ▪ Install bat crossings in high use forested areas fragmented by construction of the road. ▪ Reclaim areas quickly with natural vegetation augmented by planting and seeding. ▪ Blasting will be conducted outside sensitive windows, unless specific approvals have been granted by regulatory agencies. ▪ Vegetation clearing in suitable roosting habitat will be conducted outside the maternity roosting period, which occurs between May 1 and August 31. However, clearance activities must take place within the maternity roosting season exit surveys or acoustic monitoring may be required. Requirements will be determined in consultation with the Ministry of Environment, Conservation and Parks.

ES 8.7.3.4 Birds

Project Effects and Key Mitigation Measures: Birds
Birds: Project effects include: Wildlife Habitat Loss / Destruction; Wildlife Habitat Alteration / Degradation; Alteration in Wildlife Movement and; Wildlife Injury / Death. ▪ Changes to bird habitat availability. ▪ Changes to abundance and distribution of birds and bird habitat. ▪ Changes to bird survival and reproduction. ▪ Changes to bird species richness. ▪ Changes to bird survival and reproduction. ▪ Changes to predator access, habitat use and population. **Proposed Mitigation Measures During Construction** ▪ Identified areas of critical bird habitat were avoided, where feasible, as part of the evaluation of route alternatives. ▪ Minimizing the extent of vegetation clearing at quarries / pits and other temporary areas. ▪ Clearly delineate the boundaries of work areas (e.g., vegetation clearing) to prevent habitat destruction beyond the established limits. ▪ Use qualified project personnel to identify Significant Wildlife Habitat features locations during pre-construction and construction. If Significant Wildlife Habitat is identified develop feature specific mitigation program. ▪ Keep construction footprints as small as possible and minimize / restrict clearing near sensitive areas. ▪ Reclaim areas quickly with natural vegetation augmented by planting and seeding. ▪ Ensure adequate training of workers in the handling and storage of hazardous materials. ▪ Ensure equipment has air / noise pollution control mechanisms in good working order. ▪ Ensure emergency spill response equipment and material are available a at all construction sites. ▪ Blasting will be conducted outside sensitive windows (migratory bird nesting period), unless specific approvals have been granted by regulatory agencies. ▪ Implement mitigation measures outlined in mitigation plans for noise, vibration, light, dust and spills. ▪ Vegetation buffers should be maintained around sensitive habitats to reduce sensory impacts. ▪ Reduce posted speed limits in sensitive areas. ▪ Restrict public access to road during construction. ▪ Prohibit firearms in camps and construction areas to avoid increase in hunting. ▪ Reclaim areas quickly with natural vegetation augmented by planting and seeding. ▪ Speed limits for construction vehicles will be enforced on the ROW, camps and access roads.

Project Effects and Key Mitigation Measures: Birds

- Vegetation removal in suitable nesting habitat will be conducted outside of nesting periods. For migratory birds the nesting period is from May 1 to August 31.
- If removal of vegetation is required within the breeding windows targeted nest sweeps will be conducted by qualified personnel. If birds within the work area are displaying breeding behaviour apply mitigation measures including stopping all activities and establishing buffers around nest.
- Conduct vegetation management with the road ROW (e.g., mowing and brushing clearing) outside of the bird nesting periods.
- Prior to removal of hazard trees assess for potential use by raptors or cavity nesting species.
- ***Waterfowl:*** Stream crossings designs with respect to size of culverts and bridges will avoid creating barriers for waterfowl to cross under road; and where practical to maintain vegetation barriers near sensitive features such as waterfowl stopover and stagging areas or waterfowl nesting areas.
- ***Wetland birds, Waterfowl, Shorebirds:*** For temporary water crossings existing stream flows will be maintained without interruption or diminishment during construction, where feasible.
- ***Forest Birds:*** Maintain multilayer vegetation edge where possible.
- ***Raptors:*** Identify existing raptor nests and establish buffers during pre-construction and construction; preserve used or potentially used large trees or snags, where possible; install nest platforms to replace or enhance habitat during active or passive reclamation; avoid high sensory activities (blasting, helicopters, night work, drilling) to the extent practicable within assigned nest buffer areas; and remove any roadkill that may act as an attractant to raptors and other predators.

Proposed Mitigation Measures During Operations

- Minimizing the extent of clearings at quarries / pits and other temporary areas.
- Brushing and clearing of ROW should not extend past limits of original clearance.
- All maintenance activities are to follow same construction mitigation measures as identified above.
- Vegetation buffers will be maintained around sensitive habitats to reduce traffic noise and light impacts.
- Maintenance activities should be limited to daylight hours in non-sensitive periods when possible.
- Limit designated rest and maintenance turnaround areas along road.
- Maintain vegetation barrier to reduce sensory impacts.
- Maintain line of sight along roadways to minimize morality / injury to birds.
- Post and enforce speed limits on proponent-controlled sections of road.
- Movement corridors will be identified, signage and reduced speeds posted.
- Quickly remove roadkill to reduce predator attractants.
- ***Raptors:*** Removal of any roadkill that may function as an attractant to raptors and other predators.

ES 8.7.3.5 Reptiles and Amphibians

Project Effects and Key Mitigation Measures: Reptiles and Amphibians

Reptiles and Amphibians: Project effects include: Wildlife Habitat Loss / Destruction; Wildlife Habitat Alteration / Degradation; Alteration in Wildlife Movement and; Wildlife Injury / Death.

- Changes to reptile and amphibian habitat availability.
- Changes to abundance and distribution of reptiles and amphibians and their habitats (number/ha).
- Changes to reptile and amphibian habitat availability (quantity – hectare and quality).
- Changes to reptile and amphibian survival and reproduction.
- Changes in reptile and amphibian mortality.

Proposed Mitigation Measures During Construction and Operations

- Minimizing the extent of clearings at quarries / pits and other temporary areas.
- Clearly delineate the boundaries of the work areas and vegetation management areas to prevent habitat destruction beyond the limits of the work area.

Project Effects and Key Mitigation Measures: Reptiles and Amphibians
▪ Install eco-passages in high potential wetland habitat fragmented by construction of road and temporary exclusion fencing. ▪ Keep construction footprints as small as possible and minimize / restrict clearing near sensitive areas. ▪ Reclaim areas quickly with natural vegetation augmented by planting and seeding. ▪ Blasting will be conducted outside sensitive windows (e.g., October 16 to April 14 for snake hibernacula during their overwintering period; May 1 – July 15 for amphibian breeding season), unless specific approvals have been granted by regulatory agencies. ▪ Implement mitigation measures outlined in mitigation plans for noise, light, dust and spills. ▪ Moisture regimes of wetland and aquatic habitats will be maintained to the extent practicable. ▪ Temporary crossings will be designed to accommodate anticipated water flows during their lifespan. ▪ Cross-culverts will be installed at regular intervals based on local conditions and groundwater volumes and flows in lowland areas to prevent water from ponding on either side of the roadway. ▪ Road operation activities are to include regular checking of culverts and other crossings for blockages. ▪ See Section 7 (Surface Water) and Section 8 (Groundwater) for detailed mitigation measures. ▪ Ensure all equipment and vehicles are clean when arriving on-site to prevent introduction of invasive species. ▪ Use native plants in all site restoration activities. ▪ Speed limits for construction vehicles will be enforced on the ROW, camps and access roads. ▪ Restrict public access to the road during construction. ▪ Maintain line of sight along roadways to minimize potential injury or death. ▪ Movement corridors will be identified, signage and reduced speeds posted. ▪ Vegetation clearing in wetland habitat will only be conducted after the habitat has been isolated by temporary exclusion fencing and trapped reptiles and amphibians have been rescued. ▪ During operations, vegetation clearing will occur outside of the herptile active period. ▪ Keep work areas clean and free if debris, materials and garbage that may attract rodents and their predators. ▪ Quickly remove roadkill to reduce predator attractants.

ES 8.7.4 Predicted Net Effects and Determination of Significance

The following describes the effects anticipated in each of the groups of animals that have been assessed:

- **Moose:** There are net effects on moose habitat, however due to the size of the roadway and the mitigation measures presented above, the magnitude of the effects are considered low and are not significant. The net effects regarding moose movement as well as injury / death are considered to be low as a result of the Project.
- **Furbearers:** The net effects on furbearer habitat are present, however due to the size of the roadway and the mitigation measures presented above, the magnitude of the effects are considered to be moderate to negligible.
- **Bats:** Alteration and degradation of habitat resulting from the construction and operations phases are largely expected to be limited in geographic extent to the Project Footprint and the net effect are characterized as being low to moderate in magnitude. As Bats are highly mobile and coexist in human-altered environments, including fragmented forested habitat, the impacts are not considered to be significant. With effective implementation of mitigation measures, mortalities due to collisions with vehicles, incidental take, predators, and increased energy expenditure are likely to have a low negative impact in the LSA as there is a lower likelihood for these effects to occur.

- **Birds:** The net effect of habitat loss is considered to be negative in the Project Footprint but neutral in the LSA and RSA for migratory forest birds and is therefore not significant. Alterations in movement due to sensory disturbance and habitat fragmentation caused by road construction and operation are expected to affect migratory forest songbirds in the Project Footprint and LSA, respectively, resulting in a low magnitude effect related to sensory disturbance and moderate effects for habitat fragmentation. With effective implementation of mitigation measures, mortalities due to collisions with vehicles, disturbance or destruction of occupied habitat, and predators, are likely to have a low negative impact in the LSA as there is a lower likelihood for these effects to occur. Overall, the net effects to birds are not considered significant.
- **Raptors:** The effect of habitat loss is considered to be not significant for raptors, while some large nesting trees may be lost, mitigative measures focused on preserving existing nest as well as the creation of foraging habitat for many species will result in a low magnitude of impacts. Alterations in movement due to sensory disturbance and habitat fragmentation caused by road construction and operation are expected to have little effect on raptors in the LSA, resulting in low level for effects related to sensory disturbance and for habitat fragmentation.
- **Reptiles and Amphibians:** With effective implementation of mitigation, the Project is likely to have a low to moderate negative impact on reptile and amphibian habitat availability and distribution. Most of the identified impacts to reptiles and amphibians are expected to be limited to the Project Footprint. The effect of habitat loss is considered to be negative in the Project Footprint but neutral in the LSA and RSA for reptiles and amphibians and is therefore not significant. Alteration and degradation of reptile and amphibian habitat resulting from the construction and operations phases are largely expected to be limited in geographic extent to the Project Footprint, and low to moderate in magnitude. Reptiles and amphibians in the region are generally considered mobile and coexist in human-altered environments, including habitats fragmented by roads, therefore the majority of these effects are not expected to be significant.

ES 8.7.5 Cumulative Effects

For this Wildlife and Wildlife Habitat assessment, the net effects in Section 12.7 that are characterized as having a likelihood of occurrence of “probable” or “certain” and a “moderate” to high magnitude” have been carried forward to the cumulative effects assessment. The predicted net effects of the Project on the Wildlife and Wildlife Habitat VC that are carried forward for the assessment of cumulative effects include:

Moose

- Habitat Loss – Clearance Activities;
- Injury or Death – Increased Access; and
- Injury or Death – Changes to Predator-Prey Dynamics.

American Marten

- Habitat Loss – Clearance Activities; and
- Injury or Death – Increased Access.

North American Beaver

- Injury or Death – Increased Access.

Bats

- Habitat Loss – Clearance Activities;
- Habitat Alteration or Degradation – Changes in Vegetation Structure;
- Alterations in Movement – Sensory Disturbance; and
- Alterations in Movement – Loss of Connectivity.

Forest Songbirds

- Habitat Loss – Clearance Activities;
- Habitat Alteration or Degradation – Changes in Vegetation Structure; and
- Habitat Alteration or Degradation – Sensory Disturbance.

Wetland Songbirds

- Habitat Loss – Clearance Activities;
- Injury or Death – Changes to Predator-Prey Dynamics; and
- Injury or Death – Vehicle Collisions.

Shorebirds

- Injury or Death – Changes to Predator-Prey Dynamics.

Waterfowl

- Injury or Death – Increased Access.

Raptors

- Habitat Loss – Clearance Activities.

Reptiles and Amphibians

- Habitat Loss – Clearance Activities;
- Habitat Alteration or Degradation – Changes in Vegetation Structure;
- Alterations in Movement – Loss of Connectivity;
- Injury or Death – Incidental Take;
- Injury or Death – Vehicle Collisions; and
- Injury or Death – Disease.

The cumulative net adverse effects of the Project with other RFDs and activities on the Wildlife and Wildlife Habitat VC are predicted to be not significant, with the exception of Raptors and Reptiles and Amphibians. Based on the assessment, the cumulative net adverse effects to Red-tailed Hawk and Great Grey Owl, and Reptiles and Amphibians are considered significant. Further details on the results of the cumulative effects assessment for the Wildlife and Wildlife Habitat VC are presented in Section 21.

ES 8.7.6 Follow-up and Monitoring

The proposed follow-up monitoring program for wildlife and wildlife habitat is described as follows:

- Qualified environmental monitors are to be present on-site prior to and during construction activities.
- A qualified environmental monitor will conduct daily site inspections prior to commencement of Project works and activities to ensure wildlife are absent from work areas. A daily checklist will reflect the completion of the inspection.
- Roads secured by exclusion fencing will be monitored for wildlife road mortalities and injuries.
- Photographs of wildlife road mortalities will be submitted to a Qualified Biologist for species identification, including a description of the location and site conditions.
- Routine inspection and monitoring of exclusionary fencing for breaches or damage to the fence structure. Regular inspection of installed ESC measures by a qualified person who has training in ESC.
- ESC measures will also be inspected at critical times when erosion or sediment releases could occur, such as within 24 hours of heavy or prolonged rainfall events.
- Deficiencies documented during ESC inspections will be corrected promptly with maintenance documented.
- Culvert monitoring programs to determine if blockages form or are causing significant ponding. Debris removal will take place frequently enough so that fish and / or amphibian passage is not disrupted.
- Streamflow, turbidity, and total soluble solids and other related water quality monitoring will occur regularly during construction to ensure ESC measures are effective.
- Annual eDNA monitoring conducted in July pre-construction, during construction and during operation to detect for presence of ranavirus in waterbodies in the Project Footprint.
- Bat presence and species diversity will be surveyed during the operations phase of the road and compared to baseline data.
- Amphibian presence and species diversity will be surveyed during operations phase of the road and compared to baseline data.
- Monitor changes in moose and furbearer utilization along the ROW and adjacent areas using winter aerial and wildlife cameras.
- Acoustic Recording Units and point count surveys along the ROW during the operations phase will be conducted and compared to baseline data.
- Beaver lodge surveys to determine occupancy status prior to any in-water activities during construction and operations.
- Raptor nest surveys along the ROW prior to clearing activities and during any operations, where applicable.
- Conduct surveys to determine the presence of any waterfowl and shorebird significant nesting habitats near the alignment prior to vegetation clearing activities.

ES 8.8 Assessment of Effects on Species at Risk

ES 8.8.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Species at Risk VC, the following identified subcomponents for Species at Risk (SAR) VC were examined in the assessment:

- Terrestrial Species at Risk Populations;
- Terrestrial Species at Risk Habitat;
- Species at Risk Fish Habitat Quantity and Quality; and
- Species at Risk Fish Populations.

The Project has the potential to result in changes in SAR habitat, injury and mortality risk, reproduction, and movement. Therefore, both terrestrial and aquatic SAR and SAR habitat are considered in this assessment. The following species and species groups were considered in the SAR assessment:

Terrestrial Species at Risk include:

- Caribou (Boreal Population);
- Wolverine;
- Bats (Northern Myotis and Little Brown Myotis);
- Upland Forest Songbirds (Evening Grossbeak);
- Wetland Songbirds (Olive-sided Flycatcher and Rusty Blackbird);
- Shorebirds (Lesser Yellow Legs); Nightjars (Common Nighthawk);
- Raptors (Short-eared Owl and Bald Eagle); and
- Aquatic Species at Risk include Lake Sturgeon (Hudson Bay – James Bay population).

ES 8.8.2 Existing Conditions Summary

Existing conditions for the Species at Risk VC were established through the field work programs, review of publicly available data sets and studies, feedback from consultation activities and Indigenous Knowledge. The objectives of the studies are to identify and characterize Species at Risk within the Project Footprint as well as to identify important terrestrial features related to SAR habitat, critical life-cycle activities, including:

- Identify Species at Risk;
- Identify the presence, distribution, and abundance of Species at Risk occurring within the project areas;
- Identify and characterize critical habitat for provincial and federal species at risk; and
- Support the determination of habitat of species of special concern.

The results of the species at risk baseline studies are provided in Appendix F – NEEC Report.

ES 8.8.3 Potential Effects and Mitigation Measures

Project components and activities may cause potential effects on the terrestrial SAR populations and habitats as well as SAR fish habitat and populations. A summary of potential effects on this VC and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows:

Project Effects and Key Mitigation Measures: Species At Risk
Species at Risk: Potential effects include: Changes to the availability of Species at Risk Habitat, and Changes to the distribution of Species at Risk and SAR Habitat **Proposed Mitigation Measures During Construction** ▪ To the extent practicable, sensitive habitats and habitats identified as important to SAR were avoided during the route selection process. ▪ A Fish and Fish Habitat Management Plan, Vegetation Management Plan, Wildlife Management Plan and Site Restoration and Monitoring Plan will be developed as part of the CEMP and implemented during the construction phase. ▪ These components of the CEMP will be updated, as necessary, for implementation during the operations phase as part of OEMP. ▪ If clearing or construction activities are required to take place within Category 1 Caribou habitat during sensitive periods (May 1 to September 15 for Nursery use areas and December 1 to March 31 for Winter use areas) aerial caribou sweeps will be conducted prior to construction activities to ensure that there are no caribou within activity buffer areas (designated space between wildlife features/sensitive areas and construction activities to protect them from potential effects of construction activities). Minimum flight separation distances will be maintained to minimize potential disturbance. ▪ Vegetation clearing in suitable roosting habitat will be conducted outside the maternity roosting period, which occurs between May 1 and August 31. However, clearance activities must take place within the maternity roosting season exit surveys or acoustic monitoring may be required. Requirements will be determined in consultation with the Ministry of Environment, Conservation and Parks.. ▪ Where feasible clearing activities will occur outside of the migratory bird breeding window for nesting zone C6 (between August 30 and April 24) some clearing may be required during the nesting season. If clearing is required, pre-clearing nest sweeps will be conducted by qualified avian biologists with support from indigenous monitors. ▪ Qualified project personnel will identify sensitive habitats that are important to SAR prior to and during construction (e.g., critical habitat, areas of high use). Should any be found, they will be assessed by a qualified biologist or resource specialist and an appropriate course of action will be determined, in consultation with regulatory agencies (e.g., MECP, CWS-ECCC) as required. ▪ The Project Footprint will be limited, where practicable, and the extent of clearing for the road minimized at quarries, pits, and other temporary areas. ▪ To the extent practicable, temporary work areas will be placed in strategic locations that avoid habitats, structures and features identified either as being important or of high use to SAR (e.g., large trees). ▪ Construction fencing will be used to demarcate the boundaries of the work zone to prevent habitat destruction beyond the limits of the work area. Suitable setbacks will be established based on the Wildlife Management Plan. ▪ Vegetation removal will be avoided during species-specific, or group-specific timing windows when practicable. If adherence to timing windows is not possible, specific mitigation and monitoring measures will be developed in cooperation with MECP, CWS-ECCC, or other appropriate regulatory agencies. ▪ Authorizations, permits or other approvals will be obtained from the appropriate regulatory agencies prior to the removal of any SAR habitat. ▪ Temporary areas of disturbance will be progressively reclaimed during the construction phase and restored to a functional state as soon as possible after the completion of work. ▪ Restoration activities will include the removal of debris, soil decompaction and amendment, and other techniques to promote the re-establishment of self-sustaining vegetation native to the area. Where necessary, vegetation may be enhanced by transplanting from within the RSA or seeding and / or planting native species

Project Effects and Key Mitigation Measures: Species At Risk
from approved stock and a reputable supplier. Species of importance to Indigenous communities will form part of the preferred list. ▪ Qualified personnel will carry out site visits and inspections to verify environmental protection measures have been correctly implemented and are maintained until vegetation has re-established itself. ▪ On-site restoration will be prioritized. Where appropriate, off-site restoration / habitat off-setting opportunities will be investigated and implemented as described in Vegetation and Wetland VC assessment. ▪ Ecological (effectiveness) monitoring will be completed to verify reclamation and restoration efforts have been successful. **Proposed Mitigation Measures During Construction and Operations** ▪ All conditions of approvals, permits, authorizations s related to SAR will be followed, including those issued by MECP Species at Risk Branch or CWS-ECCC. ▪ Where practicable, large trees, shrubs, and other structures that are important to SAR will be retained in situ. Key ecological features will be clearly marked and have associated setbacks to reduce habitat change in those areas. ▪ Construction footprints will be minimized to the extent possible, particularly in the vicinity of sensitive habitats (i.e., such habitat will be buffered from work areas). ▪ To the extent possible, temporary work areas will be progressively reclaimed / restored as soon as possible following construction with a goal of recreating habitats that resemble pre-construction conditions. ▪ Restoration approaches will prioritize natural regeneration of vegetation, and, when necessary, the establishment of native self-sustaining species via transplants, or root or stem cuttings within the LSA. Where appropriate, SAR habitat may be enhanced by planting or seeding self-sustaining species indigenous to the area. Restoration will occur under appropriate environmental conditions. ▪ Qualified staff will carry out site visits to verify that environmental protection measures have been correctly implemented. They will also complete ecological monitoring to evaluate the effectiveness of habitat retention, reclamation and restoration efforts.
Species at Risk: Potential effects include: Changes to the Availability of SAR Habitat and SAR Habitat Composition (because of Hydrological Changes); and Changes to the Distribution of SAR. **Proposed Mitigation Measures During Construction and Operations** ▪ An Air Quality and Dust Control Management Plan will be developed and implemented as part of the CEMP that includes a procedure for documenting compliance and minimizing dust deposition and emission of air pollutants. ▪ An Air Quality Monitoring Program will be developed prior to and implemented during the construction phase. It will be reviewed and may be updated, as necessary, for the operations phase. ▪ Vehicles, equipment and machinery will be regularly inspected to verify emission and pollution mechanisms are functioning within expected parameters (and maintained / repaired when necessary). ▪ Best management practices will be followed regarding the deposit of acidifying compounds on plants. All federal and provincial thresholds will be met. ▪ Carpooling / multi-passenger vehicle use will be encouraged for personnel travelling to / from job site. ▪ Idling will be minimized unless weather and / or safety requires vehicles or equipment to remain turned on. ▪ Where practicable, compatible vegetation will be retained on steep slopes and areas prone to wind erosion. ▪ Dust-generating activities will be minimized during periods of high wind. ▪ Dust control measures, such as water sprays and dust control solutions will be applied when required during construction and operations. The use of chlorine-containing compounds will be minimized to the extent possible. ▪ Temporary cover (e.g., wood chips) will be used on soil and fill stockpiles where necessary if they cannot be kept moist. ▪ Dedicated diesel generator sets will be installed that include energy efficient measures. ▪ Regular inspections and maintenance activities will be completed so roadway continues to meet design/provincial standards. ▪ Education programs for members of the Webequie community involved in operations phase of the Project to encourage eco-driving.

Project Effects and Key Mitigation Measures: Species At Risk
Species at Risk: Potential effects include: Changes to the Availability of SAR Habitat and SAR Habitat Composition / Contamination (due to spills); and Changes to the Distribution of SAR. **Proposed Mitigation Measures During Construction and Operations** ▪ A Petroleum Handing and Storage Plan and a Spill Prevention and Emergency Response Plan will be implemented as part of the CEMP. Personnel shall be adequately trained to execute these plans. ▪ All petroleum products will be stored and handled according to Ontario Gasoline Handling Act. All petroleum products will be transported according to Transportation of Dangerous Goods Act (Canada) and Ontario Dangerous Goods Transportation Act. ▪ Personnel will be trained to appropriately handle and store all products in compliance with the above Acts. ▪ Fuels and other hazardous materials will be maintained, stored, transferred and dispense in designated areas, a minimum of 50 m away from waterbodies. ▪ Only approved containers and licenced vehicles will be used to transport fuel or hazardous materials. Containers will be regularly inspected for leaks and will be repaired or replaced, as necessary. ▪ Vehicles, machinery, and equipment shall have pollution control mechanisms in good working order. ▪ Signage will be installed with posted speed limits that will be enforced to minimize the risk of spills during transport of hazardous materials. ▪ Construction will be delayed during heavy precipitation or run-off events. ▪ Emergency cleanup equipment will be readily available (i.e., on-site spill kits) in all fuel and hazardous materials storage and handling facilities, at on-site work areas and / or in vehicles and equipment. ▪ Major spills of petroleum or other hazardous products will be reported to MECP's Spill Action Centre and immediate corrective action will be taken to minimize and control potential effects. ▪ 'Non-reportable' spills (according to O. Reg. 224/07) will be contained and cleaned up immediately. Subsequently, contaminated soil and / or vegetation will be removed or replaced as soon as practicable.
Species at Risk: Potential effects include: Changes to the Availability of SAR Habitat and SAR Habitat Composition (resulting from Sensory Disturbance); and Changes to the Distribution of SAR. **Proposed Mitigation Measures During Construction and Operations** ▪ A Noise and Vibration Management Plan and a Light Management Plan will be developed and implemented as part of the CEMP. ▪ A Construction Blasting Management Plan for the Project will be prepared and submitted to the Contractor prior to initiation of activity. ▪ To the extent possible, the extent of vegetation clearing will be minimized beyond the Project Footprint. ▪ Vegetation protection zones (i.e., buffers / setbacks) will be maintained to reduce sensory impacts near sensitive habitats. ▪ The extent of vegetation cleared at all waterbody crossings will be minimized. ▪ To the extent practicable, the retention of vegetation and landforms will be maximized along the ROW and the extent of disturbed areas within the ROW will be reduced. ▪ All vehicles and equipment supplied by the Contractor will be effectively 'sound reduced' with appropriate noise abatement equipment correctly installed and maintained. When not required for use, vehicles and equipment should be shut down. ▪ Timing windows and restrictions will be implemented to avoid sensitive life-cycle periods (e.g., breeding, overwintering). If adherence to the timing windows and restrictions is not possible, the proponent's contractor will develop site-specific mitigation and monitoring in consultation with appropriate regulatory agencies (e.g., MNR, CWS-ECCC). ▪ To the extent possible, construction activities will be completed during daylight hours, typically between 7:00 and 19:00, where practicable. ▪ Speed limits will be enforced for vehicles; the use of recreational All-terrain vehicles (ATVs) by construction and operations personnel will be prohibited outside of the Project Footprint. ▪ Blasting operations will be completed in accordance with federal guidelines and provincial specifications. Blasting will be completed as quickly as possible to minimize the period of disturbance. ▪ The use of artificial lights will be limited to that required for safety during the construction and operations phase of the Project, and the use of light shields considered in specific circumstances.

ES 8.8.4 Predicted Net Effects and Determination of Significance

There are predicted net adverse effects on the Species at Risk VC during both the construction and operations phases of the Project, after the implementation of the proposed mitigation measures. These net effects as result of the Project, and its associated activities, are species-specific but generally these net effects broadly include: habitat loss; habitat alteration or degradation; alterations to movement; and injury or death. Using the criteria for the characterization of the predicted effects and scoring system to determine significance, the assessment concluded that the net effects to species at risk are not significant, with the exception of effects to Caribou (Boreal Forest population) and Wolverine.

The determination of significant adverse effects to caribou is based on the potential for injury or death due to changes to predator-prey dynamics. Specifically, during construction and operations of the WSR ROW is expected to provide predators such as wolves increased access to the caribou, particularly where the road traverses natural movement corridors. Overall, caribou injury or death due to changes to predator-prey dynamics from the Project is considered a significant adverse effect based on current vulnerability of the population.

The determination of significant adverse effects to wolverine is based on potential for loss of habitat, and specifically one (1) denning site. Denning sites are the rarest and most sensitive habitat for wolverine and are reused between breeding years and are passed down from mothers to daughters. The one den site in the LSA is located within 400 m from preferred route for the WSR and will likely lose function as denning habitat due to the indirect effects of clearance activities and the construction of the road, of which studies have shown females are unlikely to den within several kilometres of roads. Based on just two (2) known reproductively mature wolverine females confirmed to have home ranges in the LSA the loss of functional denning habitat in the LSA is considered to be a significant adverse effect for wolverine.

ES 8.8.5 Cumulative Effects

For this Species at Risk VC assessment, the net effects that are characterized as having a likelihood of occurrence of “certain” and a “Moderate” to High magnitude” have been carried forward to the cumulative effects assessment. Net effects with this characterization are most likely to interact with other RFD and activities.

The predicted net effects of the Project on the Species at Risk VC that were carried forward for the assessment of cumulative effects within the Species at Risk RSAs include:

Caribou

- Habitat Alteration or Degradation – Sensory Disturbance;
- Habitat Alteration or Degradation – Hydrological Changes;
- Alterations in Movement – Sensory Disturbance;
- Alterations in Movement – Loss of Connectivity; and
- Injury or Death – Changes to Predator-Prey Dynamics.

Wolverine

- Habitat Loss – Clearance Activities;
- Habitat Alteration or Degradation – Sensory Disturbance;
- Habitat Alteration or Degradation – Hydrological Changes;
- Alterations in Movement – Sensory Disturbance; and
- Injury or Death – Increased Access.

Myotis Bats

- Habitat Loss – Clearance Activities;
- Habitat Alteration or Degradation – Changes in Vegetation Structure;
- Habitat Alteration or Degradation – Hydrological Changes; and
- Alterations in Movement – Sensory Disturbance.

Evening Grosbeak

- Habitat Loss – Clearance Activities; and
- Injury or Death – Changes to Predator-Prey Dynamics.

Olive-sided Flycatcher

- Habitat Loss – Clearance Activities; and
- Injury or Death – Changes to Predator-Prey Dynamics.

Rusty Blackbird

- Injury or Death – Changes to Predator-Prey Dynamics.

Lesser Yellowlegs

- Injury or Death – Changes to Predator-Prey Dynamics.

Bald Eagle

- Habitat Loss – Clearance Activities.

Short-eared Owl

- Habitat Loss – Clearance Activities.

Lake Sturgeon

- Changes to Fish Populations – Changes to public access.

The cumulative net adverse effects of the Project with other RFDs and activities on the Species at Risk VC are predicted to be not significant, with the exception of the cumulative effects to:

- **Caribou** – The net adverse cumulative were considered significant to Caribou due to: habitat alteration or degradation from hydrological changes and sensory disturbances; alterations to movement from sensory disturbances; and injury or death from changes to predator-prey dynamic.

- **Wolverine** – The net adverse cumulative effects were considered significant for Wolverine due to habitat loss from vegetation clearing activities; habitat alteration or degradation from hydrological changes and sensory disturbances; alterations to movement from sensory disturbances.
- **Bats** (Little Brown Myotis and Northern Myotis) – The net adverse cumulative effects were considered significant for bats due to loss of habitat from vegetation clearing activities and habitat alteration or degradation from hydrological changes.
- **Common Nighthawk** – The net adverse cumulative effects were considered significant for Common Nighthawk due to loss of habitat from vegetation clearing activities.
- **Bald Eagle** – The net adverse cumulative effects were considered significant for Bald Eagle due to loss of breeding habitat from vegetation clearing activities.

Further details on the results of the cumulative effects assessment for the Species at Risk VC are presented in Section 21.

ES 8.8.6 Follow-up and Monitoring

The recommended monitoring program related to SAR and SAR habitat VC includes the following:

All Species

- Remote Camera Monitoring will take place along the proposed road ROW and at reference sites to monitor the occurrence and distribution of wildlife SAR within the RSA. This program will commence during the construction phase and continue during the operations phase.

Caribou

- GPS collars may be deployed on female caribou to determine if seasonal movements and habitat use change during or following road construction.

Data from GPS collars will be used to inform construction activities. Collared caribou will be monitored daily during sensitive periods to inform construction activities. Construction activities will not commence until collar data indicates the collared caribou has left the disturbance buffer around the construction activity. The size of these spatial buffers will be activity and seasonally dependant and determined in conjunction with regulators and based on existing scientific literature.

Wolverine

- Potential wolverine dens along the project alignment will be identified and monitored using aerial surveys during the denning period prior to the start of clearing activities.
- If clearance is required within the wolverine denning period (January 15 to May 31) target denning surveys will be conducted within a 4 km radius of the proposed activity.

SAR Bats

- Pre-construction bat maternity roost surveys will be conducted within the Project Footprint to identify potential maternity roosting habitat.

- If potential maternity roosting habitat is identified and clearance activities are scheduled to take place within the bat maternity roosting season (May 1 to August 31) exit surveys or acoustic monitoring may be required.

SAR Birds

- While no Bald Eagle nests were recorded along the ROW, pre-clearance surveys or monitoring for raptor nests will occur along parts of the road alignment in forest ecosites containing suitable nesting trees.
- Lesser Yellowlegs will be part of pre-clearance wildlife surveys to determine the presence of any waterfowl and shorebird significant nesting habitats near the alignment prior to clearing.
- Short-eared Owl roadside surveys will take place along the road alignment. These surveys will also follow the Saskatchewan Short-eared Owl Survey Protocol (SME, 2015). The schedule for surveys in terms of frequency of surveys and the number of years post beginning of operation of the road will be determined in consultation with Environment and Climate Change Canada.

Lake Sturgeon

- Pre- and post-construction downstream fish habitat assessments to evaluate habitat alterations, including monitoring changes to stream morphology and substrate caused by increased sediment loads or changes in streamflow.

ES 8.9 Assessment of Effects on Social Environment

ES 8.9.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Social Environment VC, the following identified subcomponents for Social Environment VC were examined in the assessment:

- Population and Demographics;
- Housing and Accommodations;
- Community Services;
- Education, Training and Traditional Knowledge;
- Emergency and Protective Services;
- Community Infrastructure; and
- Community Well-Being and Safety.

ES 8.9.2 Existing Conditions Summary

To characterize the social existing conditions a mix of data collection methods and approaches were applied, in conjunction with analytical frameworks. Data collection methods included secondary and primary data source research, combined with analytical framework considerations such as: Indigenous Knowledge, community knowledge, meaningful engagement and consultation, and Gender-Based

Analysis Plus (GBA+). Community profiles were developed to present data metrics that define the indicators used to assess changes to each VC subcomponent.

ES 8.9.3 Potential Effects and Mitigation Measures

Project components and activities (e.g., road construction, road operations, etc.) may cause potential effects on the Social Environment VC. A summary of potential effects on this VC and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Social Environment VC
Population and Demographics: Potential effects include: Change in population, including gender and age; loss of Indigenous identity; loss of languages; and change in mobility and increased migration. **Proposed Mitigation Measures During Construction and Operations** ▪ Implementation of Community Readiness Plan (CRP) that outlines the overall approach for the mitigation of any adverse effects and the enhancement of any positive effects of the Project. ▪ Implement measures to enhance the level of in-migration and reduce out-migration of Webequie First Nation community members that include: ▫ Develop education, skills and training approach for community members to align with Project opportunities. ▫ Incorporate traditional learning and cultural teachings into training. ▫ Alignment with existing programs and services.
Housing and Temporary Accommodation: Potential effects include: reduced housing availability; reduced housing affordability; and change in housing condition. **Proposed Mitigation Measures During Construction and Operations** ▪ The CRP will include plans for enhancing housing stock to address housing capacity issues. ▪ Use of four construction camps to accommodate temporary workers to avoid pressure on existing community services and housing in Webequie.
Community Services: Potential effects include: Increased demand for community services; and change in supply and capacity of community services. **Proposed Mitigation Measures During Construction and Operations** ▪ The Project will provide services for temporary workers to minimize or avoid strain on existing community services. ▪ Implement a Community Well-being Monitoring and Adaptive Management Plan to monitor various parameters including pressure on Community Services. ▪ Potential expansion of existing community services. ▪ Potential implementation of additional health awareness and promotion efforts. ▪ Implementation of a dedicated childcare and early childhood drop-in centre to enable families to participate in business and employment opportunities from the Project.
Education, Training and Traditional Knowledge: Potential effects include: Improved education and training attainment; improved training opportunities; increased demand for community education and training services; change in supply and capacity of community education and training services; and greater opportunity for learning of traditional knowledge, as equal of importance to western education and training. **Proposed Mitigation Measures During Construction and Operations** ▪ Implementation of CRP enhancement measures to identify and plan for education and training needs, especially underrepresented groups (youth, women, Elders). ▪ Integrating ongoing skills inventory studies in Webequie and other LSA and RSA communities. ▪ Facilitating in-community training. ▪ Develop scholarships and partnerships with colleges and universities.

Project Effects and Key Mitigation Measures: Social Environment VC
▪ Provision of on-reserve and on-the-job training (e.g., trades apprenticeships, surveyors, heavy equipment operators and road safety auditors). ▪ Pre-employment training to equip underrepresented Webequie members (i.e., youth, women) for the Project employment opportunities. ▪ Convene a sub-working group on education, training and traditional learning that will monitor communities that require adequate capacity to deliver programming for community members. ▪ Providing programming that assists youth and other underrepresented groups in gaining the necessary skills to gain employment. ▪ Upgrade / expansion of existing primary school or new primary school. ▪ Space for metal health including counselling and programming; A training centre and a high school, or a combination of both together. ▪ Completing the land-base camp as a healing and teaching space. ▪ A community kitchen for teaching and for helping with food security. ▪ A standalone day care / early years centre, or as part of an expansion on the primary school (Headstart is already operating at the school).
Emergency and Protective Services: Potential effect include: Increased demand for community emergency and protective services; and change in supply and capacity of community emergency and protective services. **Proposed Mitigation Measures During Construction and Operations** ▪ Construction camps will have first-aid stations to address minor incidents on-site. ▪ Helicopters will also be available at camps to provide emergency evacuation to the nearest medical facility. ▪ A Community Well-being Monitoring and Adaptive Management Plan will monitor of road safety and emergency and protective services capacity. ▪ Develop and implement a Road Safety Plan. ▪ Security staff to patrol the construction camp for hazards / threats (e.g. wildlife) and protect workers. ▪ Workers will also be safety-trained prior to commencing work to ensure they are capable of performing their duties safely. ▪ Develop and implement a Health and Safety Plan. ▪ All safety incidents related to the Project will be reported within 24-hours and records of these incidents will be archived. ▪ The Project will have health and safety staff who are qualified to provide immediate medical care for the construction phase.
Community Infrastructure: Potential effects include: Increased demand for community services and/or infrastructure; and change in supply and capacity of community services and/or infrastructure. **Proposed Mitigation Measures During Construction and Operations** ▪ Implementation of temporary construction camps that provide infrastructure services for the Project. ▪ Proposed infrastructure enhancements in the Webequie community as part of a Housing and Infrastructure Enhancement Plan. ▪ An updated Webequie First Nation Capital Planning Study is required for a full and up-to-date needs assessment to confirm upgrades needed for housing and infrastructure. ▪ Housing and infrastructure enhancements are also outlined as part of the CRP.

Community Well-Being and Safety: Potential effects include: Change in social cohesion and culture; change in participation in social and / or cultural events; change in safety; and change in nuisance effects.
Proposed Mitigation Measures During Construction and Operations
▪ Coordination of community events that bring together the community and the Project employees.
▪ Providing culturally relevant training and counselling supports for Indigenous employees.
▪ CRP implementation, including:
  ▫ Establishment of a group made of community members to function as Community Liaison Officers.
  ▫ Developing a grievance mechanism for community concerns and issues.

Project Effects and Key Mitigation Measures: Social Environment VC
▫ Creating and implementing training programs focused on the safety of women, girls and 2SLGBTQQIA people. ▫ Establishing partnerships with Kiikenomaga Kikenjigewen Employment & Training Services (KKETs) to provide driver's education and licensing. ▫ Establishing procedures and plans regarding drug and alcohol usage during Project work. ▫ Develop management plans to address nuisance effects. ▪ Air Quality and Dust Control Management Plan. ▪ Noise and Vibration Management Plan. ▪ Light Control Management Plan. ▪ Construction Waste Management Plan.

ES 8.9.4 Predicted Net Effects and Determination of Significance

There are predicted net positive and adverse effects on the Social Environment VCs as a result of the Project during the construction and operations phases. Positive effects include improved education and training attainment, increased housing availability, and enhanced community infrastructure. These effects are generally characterized as being low to moderate in magnitude and are expected to benefit Webequie First Nation and surrounding communities.

Adverse net effects are predicted for several social components, including community services, emergency and protective services, traditional learning programming, and aspects of community well-being and safety. These adverse effects are generally characterized as low to moderate in magnitude, with most being intermittent and medium-term in duration. While some effects are considered irreversible, the majority are reversible and are not expected to result in significant long-term disruption. Overall, the predicted net effects on the Social Environment VCs are considered not significant after the implementation of mitigation measures. Details of the characterization of predicted net effects on the Social Environment VCs, including the determination of significance, are presented in Section 14 of the EAR/IS.

ES 8.9.5 Cumulative Effects

For the assessment of the Social Environment VCs, the predicted net effects characterized as having a moderate to high significance were carried forward to the cumulative effects assessment. The predicted net effects with this characterization are most likely to interact with other RFDs and activities. The cumulative effects assessment for the Social Environment VCs is primarily focused on the Webequie First Nation community. It describes how the interacting effects of human activities and natural factors are predicted to affect social environment indicators for: Community Cohesion; Community Safety; and Traffic Safety.

The net adverse cumulative effects of the Project with other RFDs and activities on the Social Environment VC subcomponents of Community Cohesion, Community Safety and Traffic are predicted to be significant. Further details on the results of the cumulative effects assessment on the Social Environment VC are presented in Section 21.

ES 8.9.6 Follow-up and Monitoring

A Socio-Economic Monitoring Program will be initiated at each phase of the Project. This will include the follow-up and monitoring of net predicted effects and cumulative effects and the effectiveness of mitigation measures to address potential adverse effects. Follow-up and monitoring are aimed at the identification and management of effects that were not expected or identified in the assessment. The Socio-Economic Monitoring Program is designed to be dynamic, allowing adjustments based on ongoing findings and community feedback to ensure the Project aligns with the aspirations of Webequie and other communities. The following components may be implemented as part of the program:

- **Grievance monitoring:** Setup of a grievance mechanism for the Project, preferably with support from community members, to keep track of issues related to the Project, including racism, sexism, gender-based violence, and other issues.
- **Involvement of Community Liaison Officers:** Establish a working group of community members to function as liaison officers employed under the Project, to provide updates and information on Project, collect feedback and suggestions, resolve any issues / problems related to community's needs, and act as a point of contact for Project' connection to the community.
- **Reporting and Adjustment:** Regularly report findings to the community and Project stakeholders. Use this data to make any necessary adjustments to the Project approach to enhance local benefits and address concerns.
- **Community database of infrastructure:** Establishment of a comprehensive database of community infrastructure, including housing, based on the Webequie Community Comprehensive Plan (Webequie First Nation, 2023), to keep track of changes done during WSR and other projects, and carry out comprehensive projections for future needs and community.
- **Post-Project Evaluation:** After the completion of the road construction, perform a final evaluation to measure the long-term impacts and goals set out at the Project's initiation.

ES 8.10 Assessment of Effects on Economic Environment

ES 8.10.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Economic Environment VC, the following identified subcomponents for Economic Environment VC were examined in the assessment:

- Labour Force, employment and income;
- Overall economy;
- Business environment; and
- Public and Indigenous community finance.

ES 8.10.2 Existing Conditions Summary

To characterize economic existing conditions within the spatial and temporal boundaries defined for the Project, a mix of data collection methods were applied, in conjunction with analytical frameworks that integrate information using various lenses or perspectives to deepen the understanding of economic conditions. Data collection methods included secondary and primary data source research, combined with analytical framework considerations such as: Indigenous Knowledge, community knowledge, meaningful engagement, and GBA+. Community profiles related to the economic environment were developed through the data collection process. The profiles are intended to present data metrics that define the indicators used to assess changes to each Economic VC subcomponent.

ES 8.10.3 Potential Effects and Mitigation Measures

Project components and activities (e.g., road construction, road operations, etc.,) may cause potential effects on the Economic Environment VC. A summary of potential effects on this VC and the proposed key measures for enhancement of project economic benefits or mitigation measures to eliminate, reduce, control potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Economic Environment VC
Labour force, employment and income: Project effects include changes to labour force participation; and labour income. **Proposed Mitigation Measures During Construction and Operations** The Project results in positive effects due to employment and expenditures. Mitigation measures are included for social and economic well-being of communities: ▪ Develop and implement Environmental and Cultural Awareness and Education and Training for Project personnel.
Overall economy: Project effects include changes to Gross Domestic Product (GDP); cost of living; economic development; and traditional economy. **Proposed Mitigation Measures During Construction and Operations** The Project results in positive effects due to increased employment and business opportunities and increased expenditures. Following mitigation measures are included for enhancing Project benefits: ▪ Procurement policies that favourably consider Webequie First Nation and other LSA businesses. ▪ Construction Effect Management for effects on natural environment. ▪ Dynamic and Sustainable Approach for Project Planning and Design.
Business Environment: Project effects to main employers: local economy and; mining, aggregate, and forestry activity. **Proposed Mitigation Measures During Construction and Operations** The Project results in positive effects due to increased opportunities for business development and growth. Following mitigation measures are included for enhancing Project benefits: ▪ Procurement Policies that consider Webequie and Local Study Area Businesses.
Public and Indigenous community finance: Project effects to public and Indigenous community finances. **Proposed Mitigation Measures During Construction and Operations** Enhancement measures are proposed to improve community readiness of Webequie First Nation and other LSA communities, as needed.

ES 8.10.4 Predicted Net Effects and Determination of Significance

There are predicted net positive and neutral effects on the Regional and Local Economy subcomponent VC as a result of the Project during both the construction and operations phases. Positive effects are expected in areas such as employment, income, and the business environment, particularly within the Webequie First Nation and other Local Study Area communities. These effects are generally of low to high magnitude, occur frequently, and are considered irreversible. The likelihood of occurrence is certain, and the context varies in resilience and susceptibility across the Project Footprint, LSA, and RSA. While there are some adverse effects on the traditional Indigenous economy, these are accompanied by broader economic benefits, including increased GDP, household spending, and land utilization.

Changes in public and Indigenous community finances are characterized as neutral, with low magnitude and continuous occurrence, primarily within the RSA. These effects are also irreversible and certain, though they are not expected to result in significant disruption or adverse effect. Details of the characterization of predicted net effects on the Regional and Local Economy VC, including the determination of significance, are presented in Section 15 of the EAR/IS.

ES 8.10.5 Cumulative Effects

For VCs where project environment interactions are assessed as having no net effects, positive net effects, negligible to low net effects, and assessed with a likelihood of occurrence as “unlikely” or “possible” are not carried forward to the cumulative effects assessment. For the assessment of the Economic Environment VC, the predicted net effects are characterized as neutral or positive and were not carried forward to the cumulative effects assessment.

ES 8.10.6 Follow-up and Monitoring

The monitoring program for the Economic Environment VC includes the following:

- **Employment Tracking**: Implement a system to track the employment of local community members in the Project, including job roles, duration of employment, and wage levels. This will help assess if the Project meets or exceeds the set targets for local hiring.
- **Business Participation:** Monitor the involvement of local businesses in the Project. This includes direct contracts, subcontracts, and other procurement opportunities extended to local enterprises.
- **Economic Impact Assessment:** Conduct regular assessments to evaluate the broader economic impact on the community, such as increased local spending and improvements in local infrastructure that support other economic activities.
- **Feedback Mechanisms:** Establish robust feedback mechanisms to collect insights and concerns from the community regarding the Project’s economic effects. This could include surveys, focus groups, and public meetings.
- **Reporting and Adjustment:** Regularly report findings to the community and Project stakeholders. Use this data to make any necessary adjustments to the Project approach to enhance local benefits.
- **Post-Project Evaluation:** After the completion of the road construction, perform a final evaluation to measure the long-term effects and success in achieving the economic goals set out at the Project's initiation.

ES 8.11 Assessment of Effects on Non-Traditional Land and Resource Use

ES 8.11.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Non-traditional Land and Resource Use VC, the following identified subcomponents for Non-traditional Land and Resource Use VC were examined in the assessment:

- Land Use Compatibility and Stewardship;
- Commercial and Industrial;
- Recreation and Tourism (i.e., camps, trails, waterways, etc.);
- Provincial Parks and Protected Areas (i.e., Areas of Natural and Scientific Interest (ANSI), and conservation reserves); and
- Transportation: Road transportation and air transportation.

ES 8.11.2 Existing Conditions Summary

To characterize Non-traditional Land and Resource Use existing conditions a mixed methods data collection approach was used. Data collection included secondary and primary data source research, combined with considerations such as: GBA+, Indigenous Knowledge, and input and feedback during consultation and engagement.

ES 8.11.3 Potential Effects and Mitigation Measures

Project components and activities may cause potential effects on the Non-traditional Land and Resource Use VC. A summary of potential effects on this VC and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Non-Traditional Land and Land Resource Use VC
Land Use: Projects compatibility with existing and proposed land uses and stewardship. **Proposed Mitigation Measures During Pre-Construction** ▪ Comply with federal legislation and guidance for removal of aggregate at source area ARA-4. ▪ Consider restriction to WSR access to minimize trespass on Webequie Frist Nation reserve land using federal and provincial policy and tools. ▪ Develop and promote plans for First Nations' Shared Stewardship of Lands.

Project Effects and Key Mitigation Measures: Non-Traditional Land and Land Resource Use VC
Tourism and Recreation: Project effects may include changes to: location, number, type of recreation and tourism activities or users; access for land and waterway use; and resource availability of select species (fish, wildlife) or their habitat. **Proposed Mitigation Measures During Construction and Operations** ▪ Support the removal barriers to employment associated with land and resource use to help increase employment income that can be used to offset cost of living in a remote community, which include getting out onto the land. ▪ Manage remoteness and "Outsiders" access and potential impacts on fish and wildlife resources. ▪ Establish community construction committee to notify, update and coordinate with selected contractor on impacts to existing land and water travel routes. ▪ Continue First Nation engagement and consultation in subsequent stages of the Project on impacts to: recreational / land user camp site; use of removed trees for new recreational facilities; navigable waterways; and coordination with recreation programs and land users for waterway travel routes. ▪ Consider adaptive management strategy for over-harvesting and co-management approaches with tourism operators where applicable.
Provincial and Federal Parks, Ontario Areas of Natural and Scientific Interest (ANSI) and Other Protected Areas: There are no designated provincial parks, federal Nation Parks, Ontario ANSI's, Migratory Bird Sanctuaries or ither National Wildlife Areas directly or indirectly affected by the Project and therefore no mitigation is proposed.
Commercial / Industrial: Project effects may include changes to location, number, type of industrial and commercial activities. **Proposed Mitigation Measures During Construction and Operations** ▪ Decommission and restore temporary supportive infrastructure that are located in areas of mine claim to holders, where applicable. ▪ To address potential increase in mining claims and tenure which is a concern to some First Nations, the proponent in the context of the road will consider using Mining Act instruments to minimize potential increase in mining claims. ▪ Regular inspection and monitoring of aggregate use during the operations phase will be conducted to minimize potential expansion of, or new, aggregate source areas. ▪ Proponent will identify and resolve any issues or concerns regarding compensation for claims and tenure in the Project Footprint. ▪ Decommissioning and restoration of temporary supportive infrastructure locations (construction camps, aggregate source areas ARA-2) will be completed following construction to return the subject lands to its former condition or a condition that is compatible with the surrounding area.
Transportation: Project effect may include changes to road transportation use and traffic; and air transportation. **Proposed Mitigation Measures During Construction and Operations** ▪ Establish Technical Working Group to coordinate transport and mobilization of supplies that will increase air and road traffic. ▪ Develop traffic management plans for construction and operations, including coordination of work, traffic signage and advanced notification to road closures or land restrictions. ▪ Develop and implement winter roads improvements to address Project needs where applicable. ▪ Implement airport and air service improvements (including airport redevelopment at Webequie) to manage increasing demand for air services.

ES 8.11.4 Predicted Net Effects and Determination of Significance

There are predicted net effects on the Non-Traditional Land and Resource Use VCs as a result of the Project during both the construction and operations phases. These effects vary across subcomponents, including land use, commercial and industrial activity, recreation and tourism, and transportation.

For land use and commercial / industrial activities, potential effects such as incompatibility with land use policies and changes in mining claims or aggregate sources are anticipated. With the implementation of mitigation measures such as adherence to federal legislation, land use planning, and infrastructure decommissioning, no significant net effects are predicted. In the recreation and tourism subcomponent both adverse and beneficial effects are expected. While there may be reductions in access and resource availability, increased recreational activity and tourism opportunities are also anticipated. With mitigation and engagement measures, the net effect is considered a net benefit. For transportation, increased road and air traffic is expected due to construction and operations of the Project. Mitigation measures, including infrastructure improvements and coordination through a Technical Working Group, are expected to manage these changes effectively. Overall, the predicted net effects on the Non-Traditional Land and Resource Use VCs are considered not significant after the implementation of mitigation measures. Details of the characterization of predicted net effects on the Non-traditional Land and Resource Use VC, including the determination of significance, are presented in Section 16 of the EAR/IS.

ES 8.11.5 Cumulative Effects

The predicted net effects of the Project on the Non-Traditional Land and Resource VC that were carried forward for the assessment of cumulative effects within the Non-Traditional Land and Resource RSA include: Change in Transportation: increased traffic volumes on existing roads (including winter roads and provincial highway network). The cumulative net adverse effects of the Project with other RFDs and activities on the Non-Traditional Land and Resources VC are predicted to be not significant. Further details of the results of the cumulative effects assessment for the Non-Traditional Land and Resource VC with consideration of RFDs and activities are presented in Section 21.

ES 8.11.6 Follow-up and Monitoring

The proponent will be responsible for the monitoring of Project effects listed below which will need to be carried out at intervals through each phase. The Non-Traditional Land Use Monitoring Program is proposed to consist of:

- **Provincial and federal legislation monitoring** – New acts, or changes (repeals or amendments) to existing legislation may be affected through all phases of the Project. In the construction phase, changes in legislation such as in the use of Crown Lands, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) Act, Far North Act, and Ontario's Provincial Policy Statement may have an impact on the Project's non-traditional land use.
- **Recreational Participation Tracking** – Maintaining relationship and connection to the land or "to get out onto the land" is a key aspect of First Nation identity. Getting out onto the land, whether for traditional or recreational purposes will be tracked to understand the timing, duration and frequency of community members access to the land by foot or by boat that will help to understand the

community's patterns of use for coordination with construction and operations activities, with objective to minimize or avoid conflicts.

- **Tourism Tracking** – Tourism tracking is recommended through establishing partnerships with tourism operators and First Nations communities who have recreational facilities and services for tourists to assess influence of the WSR on tourism and recreation in the study area.

ES 8.12 Assessment of Effects on Human Health

ES 8.12.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Human Health VC, a tiered approach to the social determinants of health was applied focussing on the following areas identified by engaging with Webequie First Nation and from Indigenous Knowledge and Land and Resource Use Information shared by other Indigenous communities:

Level 3 Determinants of Health – Structural or systemic factors:

- Colonialism and trauma of residential schools;
- Racism and social exclusion;
- Local economic growth; and
- Self-determination and governance; and Worker accommodations (i.e., Safety and security).

Level 2 Determinants of Health – Environmental and community factors:

- Air quality;
- Noise levels and vibration;
- Water quality;
- Light pollution;
- Housing;
- Employment and income; Education;
- Food security;
- Social cohesion and cultural continuity;
- Safety and security of women and girls;
- Traffic volume and safety;
- Access to healthcare services;
- Access to social, mental health and family services;
- Access to transportation services;
- Access to emergency response services; and
- Childhood Development.

Level 1 Determinants of Health – Individual, behavioural and biological factors:

- Mental well-being;
- Substance use; and
- Diet.

ES 8.12.2 Existing Conditions Summary

The scope and content of the human health baseline reflect the specific project context, taking into account how Webequie residents view their health, and includes indicators that are meaningful to the community and that can also inform the effects analysis. The baseline community health profile for Webequie First Nation was developed based on the requirements set out in the federal TISG for human health conditions. The Community Health Survey, focus groups and community representative interviews were conducted to develop a community-specific baseline health profile.

Additional information related to services available to Webequie First Nation and access to those services was also available through the socio-economic baseline study for the Project and information available from previous health and other studies conducted for the Webequie First Nation community. Hence, the baseline health profile was based on collating data and information gained from the community engagement, as well as from identification and analysis of existing health data and information for Webequie First Nation, where available.

ES 8.12.3 Potential Effects and Mitigation Measures

Project components and activities during construction and operations may cause potential effects on the Human Health VC. A summary of potential effects on this VC and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:
Level 3 Determinants of Health – Structural or systemic factors
Colonialism and trauma of residential schools: Temporary disruption in the traditional practices on the land and impact to cultural identity; Local business and economic development; and easier access of illicit substances and alcohol into the community. **Proposed Mitigation Measures During Construction** ▪ M: Webequie First Nation will consult with community members throughout the construction phase to provide regular updates regarding construction activities that may impact traditional activities on the land, so community members are prepared for the changes. The contractor will aim to avoid impacts to traditional land activities as much as possible. The proponent will develop and implement cultural training programs (e.g., Indigenous Awareness Training). The overall aim will be for the contractor to learn about cultural protocols and avoid actions that could exacerbate trauma, such as disrupting sacred lands or cultural sites. ▪ M: Webequie First Nation and the contractor will aim to limit outsiders working on construction on the Project from entering the community to the extent possible. This may limit the amount of illegal drugs and alcohol from entering the community, and limit impacts to mental health. ▪ M: Webequie First Nation will work with the Province to increase access to trauma-informed mental health services and traditional healing practices for community members such as counselling, support groups, and healing circles.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:
▪ E: Webequie First Nation will work with the contractor to help ensure that the Project creates employment opportunities for community members, including Investing in training programs to build community capacity. **Proposed Mitigation Measures During Operations** ▪ M: Webequie First Nation will aim to limit outsiders from entering the community through the WSR to the extent possible. This may limit the amount of illegal drugs and alcohol from entering the community, and limit impacts to mental health. ▪ E: Webequie First Nation will aim to help ensure that the employment and economic growth opportunities from the Project creates sustainable employment and positive growth in income for most community members. This will help most members of the community access the services they need to address the trauma and mental health issues due to residential schools and colonization.
Racism and social exclusion: Racism from external workers; and feeling of isolation and loneliness due to being away from community / family. **Proposed Mitigation Measures During Construction** ▪ M: The contractor will be advised to work with Webequie First Nation to promote respectful relationships between Webequie First Nation members and construction workers by implementing regular mandatory in-person cultural and Indigenous awareness training to increase awareness and knowledge of Indigenous history and culture among workers and on raising awareness for the safety of Indigenous women and girls. ▪ M: The contractor will establish and enforce zero-tolerance policies on racism and violence in the workplace, which can help to provide a safer, more understanding work environment for Indigenous employees and encourage the potential Indigenous employees.
Local economic growth: Local business and economic development; and Employment opportunities. **Proposed Mitigation Measures During Construction and Operations** ▪ E: Webequie First Nation will consider the ways in which the construction phase of the Project may boost local business development, financial independence for the First Nation, development of business relationships with surrounding Indigenous and non-Indigenous communities, and employment opportunities for community members. ▪ E: Prior to construction, it is suggested Webequie First Nation develop a Businesses Development Plan to: ▫ Outline an inventory of local and / or Indigenous-owned companies that can be used throughout the construction phase. ▫ Identify specific Project services that would be targeted to local and / or Indigenous-owned businesses. ▫ Establish procurement policies for the recruitment, development, and retention of underrepresented groups of Webequie First Nation, other LSA communities and the RSA. ▫ Set procurement targets (e.g., total contract value, employment of specific groups like women, youth and individuals with disabilities) for the participation of local and / or Indigenous businesses in Project construction. Additional support for underrepresented groups, such as women, youth and individuals with disabilities, could be provided through opportunities such as job shadowing, mentorship programs, and paid internships. ▫ Specify how contracts should be released by the Project management to maximize Project participation by local and / or Indigenous-owned businesses. This may include providing information on advanced notice of procurement opportunities (e.g., public announcements, advertisements) and establishing clear requirements and equitable certification processes for local and Indigenous businesses. ▪ Webequie First Nation will consider that local economic growth benefits all sub-groups within the community, including women, youth and those with disabilities.
Self-determination and governance: Rights to land and resources; and Right to pursue economic prosperity and independence. **Proposed Mitigation Measures During Construction** ▪ E: To enhance physical and mental health and well-being, Webequie First Nation should have a decision-making role throughout the planning and development of the WSR. ▪ E: The community will be provided with regular information and messaging regarding planning for the Project, including challenges faced, and how they are being addressed. This will allow the community to participate in the Project throughout.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:

Proposed Mitigation Measures During Operations

- E: As was conveyed during in-person consultations, Webequie First Nation will consider how best the Project can benefit all sub-groups within the community in the long-term, with commitment to social programming in the community.

Worker accommodations (i.e., during project activities, including in construction camps): Safety and security; Availability of illicit substances; and Housing availability.

Proposed Mitigation Measures During Construction

- M: Locations of the construction camps should be chosen that minimize interactions with high traffic areas and areas that are often used for traditional activities.
- M: It is advised that non-Indigenous workers should not be allowed into Webequie First Nation during the construction phase, except by permission. Protocols should be put in-place to regulate entry of members from other Indigenous communities. This may limit negative impacts to the safety and security of Webequie First Nation. However, the extent of mitigation of the impact will depend on how effectively non-members of the community are kept out.
- M: The contractor will be advised to work with Webequie First Nation to promote respectful relationships between Webequie First Nation members and construction workers by implementing mandatory in-person cultural and Indigenous awareness training to increase awareness and knowledge of Indigenous history and culture among workers and on raising awareness for the safety of Indigenous women and girls.
- M: The contractor will work with Webequie First Nation to provide a safe and productive work environment by establishing and enforcing clear guidelines on substance use that includes the prohibition of drugs and alcohol in construction camps during the construction phase.
- E: To mitigate potential impacts on housing within the community from off-reserve members participating in construction jobs, the community can consider adding additional temporary housing within the reserve to house off-reserve members during the construction phase.

Proposed Mitigation Measures During Operations

- E: Any additional housing that is added in the community during the construction phase can be potentially converted to more permanent housing. One of the construction camps is expected to be converted to temporary housing to house medical staff, teachers, and support personnel, who want to stay in the community.

Level 2 Determinants of Health – Environmental and community factors

Air quality (including GHG emissions): Emissions, including greenhouse gases.

Proposed Mitigation Measures During Construction

- M: To minimize dust pollution, it is recommended that the contractor use tarps to prevent dust from spreading or spray the roads with a water-based solution to suppress dust, especially in dry areas such as haul / access roads or temporary soil and aggregate stockpiles. The use of dust suppression systems at quarries, truck speed limitations, vehicle and heavy equipment movement limitations to designated areas, minimizing idling and so forth.
- M: the contractor should develop and implement an Air Quality and Dust Control Management Plan to manage and reduce air contaminant emissions during construction phase. The Air Quality and Dust Control Management Plan will integrate a monitoring procedure for dustfall effects and measures to control or limit usage of vehicle or equipment that are the main emission source of particulates.
- M: Minimize the combustion of living biomass which will reduce GHG emissions by using the biomass for other purposes such as the production of roundwood and timber that would be used in Webequie for construction projects or woodchips used as mulch for landscaping, erosion control, etc.

Proposed Mitigation Measures During Operations

- M: During operations, while it is not feasible to have a direct control on emissions from vehicle engines, it is possible to work on dust emissions from the road surface. Considering that part of the road will not be fully surfaced with asphalt or chip seal from the start, the maintenance crew will operate a truck that will spray water over the gravel-surface road from May to November, or when needed.
- M: An Air Quality and Dust Control Management Plan will be developed and implemented to manage and reduce air contaminant emissions during operations phase. The Air Quality and Dust Control Management Plan will also include a procedure for documenting compliance with applicable standards and required conditions as stipulated in permits, approvals, licenses and / or authorizations.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:
Noise levels and vibration: Sound level **Proposed Mitigation Measures During Construction and Operations** ▪ M: To address the potential noise effects from blasting, it is proposed that a Construction Blasting Management Plan for the Project will be prepared by applicable contractor(s) prior to initiation of blasting activities. The plan will include a requirement for controlling peak overpressure sound levels to meet the blasting noise guidelines and criteria. ▪ M: Concerns of noise pollution has caused Webequie community members to recommend that there be more regulations around noise in the region. ▪ M: The contractor should aim to limit construction to the daytime period, where possible, especially near residences. Noise complaints, if arise during the project construction and operations, will be investigated and addressed. ▪ M: Refer to Section 9.4 for additional mitigation measures to eliminate or reduce the potential effects of noise and vibration from project activities.
Surface water quality: Change in surface water quality (e.g., habitat, chemistry, and flow rates) **Proposed Mitigation Measures During Construction** ▪ M: Dewatering, water takings, and discharges will be regulated by MECP permits (i.e., a PTTW will be required for the Project) and industry best management practices will be used to minimize dewatering / pumping volumes. ▪ M: Restore disturbed areas from vegetation clearing and grubbing to minimize effects on run-off rates. ▪ M: Erosion and sediment control measures taken into consideration when constructing waterbody crossing structures along with implementing water quality monitoring. ▪ M: Reduce construction during times that would most affect fish and fish habitat (e.g., breeding seasons). ▪ M: Proper handling and storage of petroleum and other hazardous materials as well as emergency response plans to mitigate accidental spills and leaks. ▪ M: A Construction Blasting Management Plan for the Project will be prepared. ▪ M: A Construction Waste Management Plan will be developed to minimize the amount of waste to be generated. **Proposed Mitigation Measures During Operations** ▪ M: An ongoing follow-up monitoring program (post-construction) will be implemented during the operations phase of the Project. ▪ M: Water will be used to control the dispersion of dust to nearby waterbodies.
Light pollution, including visual effects: Ambient light levels; and Qualitative visual changes. **Proposed Mitigation Measures During Construction** ▪ M: Inform community members of upcoming construction activities and where they will be focused so members are prepared to see construction equipment and changes in specific areas. **Proposed Mitigation Measures During Operations** ▪ As per the Visual Impact Assessment (Appendix R), mitigation measures for effects to visual environment will be incorporated into the project design and will be implemented to minimize negative effects. Mitigation measures considered in the potential effects analysis for visual environment included the following and are re-iterated from the human health standpoint to limit impacts to mental health as a result of change to the visual environment.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:
Housing, including access and quality: Housing capacity; Housing quality; and Housing cost (e.g., repair and construction). **Proposed Mitigation Measures During Construction** ▪ M: All workers, except individuals from Webequie First Nation, should primarily be housed in the designated construction camps. ▪ M: During the construction phase, the construction camp structures will be designed to ensure all required services are available to the workers at the camp itself, with neutral to minimal disturbance / impact to the existing community infrastructure of Webequie First Nation. ▪ E: For off-reserve members of Webequie First Nation working on the construction of the WSR, additional temporary housing within the community that can be converted into longer-term housing should be considered to avoid overcrowding in existing homes. ▪ E: The population groups who are already disproportionately affected by poor and crowded housing conditions, i.e., single mothers, older adults, women and single individuals, should be prioritized in the allocation of housing. **Proposed Mitigation Measures During Operations** ▪ E: The Webequie First Nation Community Readiness Plan will include plans and measures for enhancing housing stock to address housing capacity issues. Given the importance of housing as a vital determinant of health, these measures are also recommended from a human health standpoint. ▪ E: Off-reserve community members and medical staff and personnel should be prioritized for residence in the one construction camp expected to be converted into housing for community needs.
Employment and income: Access to employment opportunities and income. **Proposed Mitigation Measures During Construction** ▪ M: Webequie First Nation will consider working with the Province to invest in training programs to build local capacity. Webequie First Nation will also work with the contractor to consider providing childcare services so women can participate in training and education to take advantage of employment opportunities resulting from the construction phase, as well as helping to ensure that workers from the community are offered fair wages, safe working conditions, job security, and address inequalities in labour practices. ▪ M: Webequie First Nation will work with the contractor to help ensure additional support for underrepresented groups such as youth, through opportunities such as job shadowing, mentorship programs, and paid internships. ▪ E: Creation and implementation of workplace policies and programs, including a diversity and inclusion strategy, zero-tolerance policies for racism and workplace violence, codes of conduct, workplace safety programs and cultural training programs (e.g., Indigenous Awareness Training), as a means to retain employees through positive work experience. ▪ E: The contractor should consider providing disability supports (e.g., access to wheelchair and access ramps, hearing aids, etc.) to allow community members with disabilities to participate in the workforce as much as possible, potentially in desk-jobs or low intensity jobs. ▪ E: Webequie First Nation will consider a plan that would shape the Project as a source of sustainable employment opportunities for community members. Investing in training programs to build local capacity. Ensuring that workers from the community are offered fair wages, sage working conditions, job security, to address inequalities in labour practices. **Proposed Mitigation Measures During Operations** ▪ E: Safe, reliable, and accessible care options for children, older persons, and those with disabilities will help those who have care duties access and use the road to access employment opportunities. ▪ E: Creation and implementation of workplace policies and programs, including a diversity and inclusion strategy, zero-tolerance policies for racism and workplace violence, codes of conduct, workplace safety programs and cultural training programs (e.g., Indigenous Awareness Training), as a means to retain employees through positive work experience, should be implemented in all projects in the Ring of Fire area.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:
Education / Access to Education: Skills and trade skills development **Proposed Mitigation Measures During Construction** ▪ E: Webequie First Nation will work with the contractor to help ensure that educational and specialized skills training opportunities in construction will be provided to community members ahead of the construction phase, so they are prepared with necessary skills. The Community Readiness Plan will include enhancement measures for Education, Training and Traditional Learning Programming and Facility Space to identify and plan for education and training needs. ▪ E: Funding and educational programs will need to be available for members of the community to financially and practically access education and skills training required to participate in construction work. Webequie First Nation is encouraged to explore options for funding together with the contractor and the Province. Training may also be available through local educational service providers or through apprenticeships with construction companies or experienced members of the community. The community can also consider specialized programs for community members who have learning disabilities. ▪ E: Educational attainment levels for women in Webequie is lower than for men. To realize any health benefit from increased education / training in construction, some community members, and especially women, will need to be provided with childcare so they may attend training and get work.
Food security, including quality and availability of traditional foods: Access to and quality of traditional foods **Proposed Mitigation Measures During Construction** ▪ M: As there is potential for food insecurity arising from disturbance of land and habitat of traditional food sources due to construction-related activities, traditional hunting areas should be clearly identified by the contractor, and the impact to these areas from the Project should be kept minimal to avoid loss of habitat, and loss of animal traffic due to noise. This will maintain access to traditional foods, and related health benefits. ▪ M: Construction and any ground disturbing activity should be avoided by the contractor during critical windows of habitat movement, mating or spawning to help avoid lasting damage to specific species. If this is not possible, appropriate permits should be obtained to reduce the impact to wildlife. ▪ M: It is advised that Webequie First Nation be involved in all land use planning activities to manage any new developments that may arise due to the Project to secure the integrity of their traditional hunting, fishing, and trapping grounds to help to ensure current and future generations maintain traditional food security, and the health benefits associated with the consumption of traditional foods. ▪ M: It is possible that construction workers who are not members of Webequie First Nation will access the traditional lands of the community to hunt for recreation and sport. This use of the land by non-members should be prohibited or strictly regulated by Webequie First Nation during the construction period to maintain self-sustaining populations of traditional food sources and therefore maintain the resulting health benefits associated with traditional food security. ▪ E: Webequie First Nation can include in their Community Readiness Plan the need for continuing to provide youth and interested members of the community with knowledge related to harvesting traditional foods. This will help with the passing of traditional knowledge to the next generation, spark joy associated with traditional methods and allow the next generation to experience the health benefits associated with traditional food harvesting and consumption. **Proposed Mitigation Measures During Operations** ▪ M: The use of traditional lands by non-members will be discouraged or limited by Webequie First Nation. Hunters who are not from the community should follow all provincial regulations, and poaching should be monitored through standard enforcement procedures to help to ensure all regulations are followed. ▪ E: Community members suggest that Webequie First Nation should continue to provide youth and interested members of community with knowledge related to harvesting traditional foods.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:
Social cohesion and cultural continuity: Traditional and cultural teachings and activities **Proposed Mitigation Measures During Construction** ▪ M: The contractor is encouraged to develop policies that support flexibility in work schedule and / or opportunities for leave for Indigenous employees in order to support important cultural practices, such as harvesting, which may allow them to continue to participate in the traditional economy and harvesting. ▪ M: From the cultural enrichment plan of the Community Readiness Plan, enhancement measures for Webequie First Nation to consider could include continuing to hold camping and canoe trips, holding cultural and recreational activities, creating on the land retreats and a healing centre, creating a cultural centre, and development of new powwow grounds. ▪ M: The contractor will be advised to work with Webequie First Nation to promote respectful relationships between Webequie First Nation members and construction workers by implementing regular mandatory in-person cultural and Indigenous awareness training in order to increase awareness and knowledge of Indigenous history and culture among workers and on raising awareness for the safety of Indigenous women and girls.
Safety and security of women and girls: Safety of women and girls; and Violence and sexual exploitation of women and girls **Proposed Mitigation Measures During Construction** ▪ M: The contractor will be advised to work with Webequie First Nation to create and implement mandatory training programs focused on the safety of Indigenous women, girls and 2SLGBTQQIA individuals. ▪ M: Webequie First Nation should consider establishing a group made of community members to function as Community Liaison Officers as part of the project workforce during the construction phase, to bridge the gap between the community's needs and Project's requirements and effects (see Community Readiness Plan – Appendix N). ▪ M: The contractor will be advised to work with Webequie First Nation to develop a grievance mechanism for community concerns and issues at the construction camps, inclusive of issues regarding racism, sexism, gender-based violence, and other issues. ▪ M: Webequie First Nation will consider developing a Safety and Security Plan for Vulnerable Community Members with the purpose of providing enhanced safety and security for women, children, youth and vulnerable people in the Webequie community, including 2SLGBTQQIA and under-housed people, to address any new hazards and safety concerns related to the Project. ▪ M: It is recommended that Webequie First Nation work with government bodies on implementation of Ontario's strategy in response to the National Inquiry into Missing and Murdered Indigenous Women and Girls recommendations. **Proposed Mitigation Measures During Operations** ▪ M: It is recommended that Webequie First Nation advocate for creating and implementing training programs focused on the history and culture of Indigenous Peoples, and the safety of Indigenous Peoples, especially women, girls and 2SLGBTQQIA people for all projects being undertaken in the Ring of Fire area.
Traffic volume and safety: Traffic volume **Proposed Mitigation Measures During Construction** ▪ M: The contractor will be advised to develop a Construction Traffic Management Plan together with Webequie First Nation, to provide guidance on how project related traffic is managed in and around the project construction site, including use of the winter road during construction of the Project. **Proposed Mitigation Measures During Operations** ▪ Key mitigation measures proposed to address potential hazards of traffic during the operations phase include: ▫ Develop a plan to enforce road safety; ▫ Consider road patrols and inspections; ▫ Consider partnerships for driver education and licensing; ▫ Consider roadside safety options; and ▫ Consider maintenance / turnaround / rest areas.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:
Access to healthcare services: Demand for on-reserve healthcare services **Proposed Mitigation Measures During Construction** ▪ M: Webequie First Nation will consider working with the Province to improve health care services (including counselling services, and substance use-support programs) within the community before construction activities begin. ▪ M: Construction work will have safety management plans and workers will be required to adhere to these protocols and associated trainings for safe work. This reduces the potential for work-related incidents, such as injuries or fires. ▪ M: Construction camps are expected to have first-aid stations and occupational health and safety staff to address minor injuries and illness. ▪ M: Health and safety plans will be developed for all parts of the project activities.
Access to social, mental health and family services: Childcare services; Elder services; and Mental health services. **Proposed Mitigation Measures During Construction and Operations** ▪ M: Webequie First Nation will consider working with the Province to improve mental health care services within the community before construction activities begin to ensure the community's already limited health care services will not be burdened.
Access to transportation services: Improved mobility and travel options **Proposed Mitigation Measures During Construction** ▪ M: Webequie First Nation may want to consider how community members needing to travel to and from the community, via air travel or the winter road, to access services and for other reasons, are still able to do so freely and not impeded by the higher demand placed on air travel and by winter road to bring in construction-related equipment and personnel. **Proposed Mitigation Measures During Operations** ▪ E: For those travelling to the Ring of Fire area to access employment and opportunities via the WSR, Webequie First Nation may want to consider arranging community transportation services to assist those who are elderly, have a disability, and those who do not have access to a vehicle to access the mining areas and take advantage of opportunities. This will increase the potential positive impacts to health.
Access to emergency response services: Availability of emergency services **Proposed Mitigation Measures During Construction** ▪ M: Webequie First Nation should seek external funding for a fire station and fire truck to put out fires and protect community members. ▪ M: Additional emergency response services for drug-related medical concerns and overdoses should be considered by the community. ▪ M: Construction camps are to include a first-aid station, and occupational health and safety staff to address minor injuries and illness. Major emergencies will use helicopter transport and will not burden the health care system of the community. ▪ M: Construction work will have safety management plans and workers will be required to adhere to these protocols for safe work. ▪ M: Workers will be expected to remain within the camp at all times and will rarely enter the Webequie community, reducing the use of protective services within the Webequie community. ▪ M: Camps will also have security staff to patrol the camp for hazards / threats and protect workers. ▪ M: All safety incidents related to the Project will be reported within 24 hours and records of these incidents will be archived. **Proposed Mitigation Measures During Operations** ▪ M: As part of the Community Readiness Plan, a community well-being monitoring and adaptive management plan will monitor road safety as well as the capacity of the emergency and protective services. ▪ M: Road safety plan will include measures to mitigate adverse effects. ▪ E: Implementing road signs, raising public awareness about road safety, and providing education and awareness on road safety is also considered as an enhancement measure.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:
Childhood Development: Available services. ▪ E: As per the Community Readiness Plan, an initiative will be developed to implement a dedicated childcare and youth services drop-in centre in the Webequie community that will provide support to family members that require childcare to participate in education and training programs and employment opportunities related to the Project. In addition, a drop-in centre will also focus on services available to youth, such as services under Jordan's Principle, and people with disabilities.
Level *1 Determinants of Health – Individual, behavioural and biological factors*
Mental well-being, including prevalence of depression and anxiety: Need for mental health services; and Prevalence of mental health crises and disorders. **Proposed Mitigation Measures During Construction** ▪ M: Webequie First Nation will consider working with the Province to obtain additional mental health supports and counselling for Webequie First Nation community to help with challenges community members anticipate facing regarding project activities and concerns. ▪ M: Contact should be limited between the work camps and the community to reduce the stress and concern felt due to the threat of violence or concern for personal safety, especially by women and girls. ▪ M: The contractor will be advised to work with Webequie First Nation and aim to offer mandatory annual Indigenous cultural sensitivity training to workers to promote positive work relationships between Indigenous and non-Indigenous employees, and limit risk to the safety of women, girls and 2SLGBTQQIA individuals. ▪ M: The contractor should aim to understand Webequie cultural practices and respect cultural practices by allowing time and flexibility for workers to participate in cultural ceremonies, traditions or community events when possible as Elders believe these traditional practices promote positive mental well-being. ▪ M: To address feelings of ecological grief due to changes to the landscape, it is suggested that Webequie continue to keep community members (especially Elders) comprised of ongoing construction activities, so they are not surprised by sudden changes. And also ask the contractor to stage construction equipment and work camps away from sight lines to minimize visual disturbance to the landscape. ▪ E: The contractor should work with Webequie First Nation to understand environmental stewardship practiced by Webequie and incorporate these principes into construction practices whenever possible. **Proposed Mitigation Measures During Operations** ▪ M: Webequie First Nation will consider implementing inspection areas to not only limit access to community to outsiders, but also to discourage illegal entry of illicit substances and alcohol into the community. This will reduce safety and security risks, and improve mental wellness when members feel safe in the community. ▪ M: Webequie First Nation may wish to consider working with the Province to obtain additional mental health supports and counselling for community to help with challenges community members anticipate facing regarding project activities and concerns.
Substance use, including alcohol and drugs: Rates of substance use (perceived or quantitative) **Proposed Mitigation Measures During Construction** ▪ M: Webequie First Nation will consider increasing substance use-support services in the community before construction begins, as well as provide enhanced messaging and programming around the harms of substance use. ▪ M: It is advised that workers who are not members of Webequie First Nation not be allowed into Webequie First Nation during the construction phase. This may limit opportunities for illicit drugs and / or alcohol to be transported into the community by outsiders. ▪ M: The contractor should work with Webequie First Nation to provide a safe and productive work environment by establishing and enforcing clear guidelines on substance use that includes the prohibition of drugs and alcohol in construction camps during the construction phase. ▪ M: The contractor will be advised to provide education and training for workers on the effects of substance use and importance of maintaining a drug-free work environment.

Project Effects and Key Mitigation Measures: Effects on Human Health VC – Mitigation (M) and Enhancement (E) Measures:
Proposed Mitigation Measures During Operations ▪ M: Webequie First Nation consider implementing inspection areas to not only limit access to community to outsiders, but also to discourage illegal entry of illicit substances and alcohol into the community. ▪ M: Webequie First Nation will consider stepping up programs to educate younger generations about the effects of alcohol and drug use.
Diet, including consumption of traditional foods: Choice and availability of traditional and store-bought foods **Proposed Mitigation Measures During Construction** ▪ M: Webequie First Nation will work with contractor(s) to ensure that disturbances to the local environment are made in a way that minimizes disturbance to natural habitats and focuses on the long-term stability of wild game and traditional plant populations during construction including minimizing noise pollution, especially during key mating periods. **Proposed Mitigation Measures During Operations** ▪ M: Members of the community who hunt may want to notice and maintain records of changes in patterns of behaviour among game animals and growth patterns of traditional plants as a result of the WSR. ▪ M: Webequie First Nation is encouraged to work with the Ontario Ministry of Natural Resources to monitor and issue licenses for large game, such as moose, through the provincial hunting lottery system, and regulate fish catches by conservation laws.

ES 8.12.4 Predicted Net Effects and Determination of Significance

There are predicted net positive, negative, and neutral effects on the Human Health VC during both the construction and operations phases of the Project. These effects span across structural, intermediate, and proximal determinants of health, with varying degrees of magnitude, duration, and significance.

Structural determinants such as colonization trauma, racism, and social exclusion are expected to result in negative effects, particularly for the Webequie First Nation. While most of these effects are of low to moderate magnitude and continuous, they are generally assessed as not significant, except for racism and social exclusion, which is considered significant due to its impact on safety and security.

Determinants such as air quality, noise, water quality, housing, employment, and education show a mix of positive and negative effects. Air quality impacts are considered significant, while GHG emissions are not significant. Employment and education effects are positive and significant, particularly in terms of income and training attainment. Other effects, such as noise and surface water quality, are not significant due to their low magnitude and resilience of the affected areas.

Proximal determinants such as mental wellness, substance use, and traffic safety are primarily negative, with substance use during construction considered significant due to increased risk from external influences. Other effects in this category are generally not significant, though they require monitoring due to their potential cumulative impacts.

Overall, the predicted net adverse effects on the Human Health VC are considered not significant in most cases, with the exception racism and social exclusion, substance use and safety (including safety of woman girls) that have the potential for significant adverse effects. These adverse effect predictions are based on the unique challenges and vulnerabilities faced by Indigenous communities that are more susceptible to certain negative social and health effects due to historical and systemic inequalities. Further details of the characterization of predicted net effects on the Human Health VC, including the determination of significance and level of confidence, are presented in Section 17 of the EAR/IS.

ES 8.12.5 Cumulative Effects

For this Human Health VC assessment, the net effects that are characterized as having a likelihood of occurrence of “probable” or “certain” and a magnitude higher than “negligible” or “low” have been carried forward to the cumulative effects assessment. Net effects with this characterization are most likely to interact with other RFD and activities. Additionally, key health effects that have been identified by the community as key concerns during engagement (i.e., worker accommodations, food security, and substance use) have been retained for the assessment of cumulative effects as they were considered to be most likely to interact with other reasonably foreseeable developments and activities.

The health determinants with predicted net effects of the Project on the Human Health VC that are carried forward for the assessment of cumulative effects within the project study areas of the Human Health VC include:

- Racism and social exclusion;
- Worker accommodations;
- Food security;
- Safety of women and girls; and
- Substance use.

The cumulative net effects of the Project with other RFDs and activities on the Human Health are predicted to be not significant for most; however, there remains potential for significant adverse effects related to racism and social exclusion, substance use and safety. Further results of the cumulative effects assessment for the Human Health VC with consideration of RFDs and activities are presented in Section 21.

ES 8.12.6 Follow-up and Monitoring

Follow-up and monitoring related to the Human Health VC will be initiated at each phase of the Project. These activities will inform a precautionary approach and contribute to the understanding of changing conditions within the study area communities. This includes the Project related and cumulative effects and the effectiveness of mitigation measures in addition to effects that were not initially identified or expected.

The monitoring and follow-up of the 24 social and environmental determinants of health of the Human Health VC will require consistent monitoring to evaluate the effectiveness of the Project mitigation measures. Regular evaluation will allow the Project proponent to identify areas of concern or success in a timely manner and pivot mitigation measures if necessary.

Key Themes of the recommended human health monitoring program include the following components:

- Cultural and Social Well-being;
- Economic Development;
- Health and Wellness;
- Environmental Monitoring (i.e., air, noise surface water, etc.); and
- Infrastructure and Safety.

These recommended monitoring programs are designed to be dynamic, allowing adjustments based on ongoing findings and community feedback, ensuring that the Project aligns with community aspirations.

Further details of the human health monitoring program are presented in Section 17 and Appendix Q (Health Impact Assessment).

ES 8.13 Assessment of Effects on Visual Environment

ES 8.13.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Visual Environment VC, the following identified subcomponent for Visual Environment VC was examined in the assessment:

- Visual landscape quality.

ES 8.13.2 Existing Conditions Summary

Existing conditions of the visual environment were characterized based on the following secondary source information and primary data collection conducted for the Project, including: Geology, Soils and Terrain including detailed terrain mapping; Surface Water; Vegetation and Wetlands, including using Ontario Ecological Land Classification inventories to identify natural landform and land cover features; Socio-economic Environment; and Indigenous Knowledge and Land and Resource Use information. .

The process of characterizing existing visual landscape was also informed by the information gathered to date from engagement and consultation with Indigenous communities to confirm and understand the following:

- Vistas – meaning broad sweeping views from an elevated portion of land;
- Commonly navigated and recreationally- utilized waterbodies and watercourses; and
- Cultural land travel routes, such as those used to access hunting areas and / or sites of spiritual value or interest.

ES 8.13.3 Potential Effects and Mitigation Measures

Project components and activities may cause potential effects on the Visual Environment VC. A summary of potential effects on this VC and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Effects on Visual Environment VC
Visual Landscape Quality: The Project has potential to change the visual landscape quality in terms of visibility of the Project (visual prominence); and scenic quality, viewer sensitivity, and viewer distance ratings relative to the existing visual landscape condition. **Proposed Mitigation Measures During Construction and Operations** ▪ Avoiding new disturbances beyond the Project Footprint to the extent practicable, with particular consideration at waterbody crossing sites. ▪ Minimizing the extent of vegetation clearing at waterbody crossings, that are considered navigable waterbodies will be limited to minimize visual impacts and where necessary meet safety standards. ▪ Maximizing efforts to retain existing vegetation and landforms, to the extent practicable, to provide screening of activities and project components. ▪ Reducing the extent of disturbed area within the road ROW. Disturbed areas will be restored and seeded to allow for natural revegetation and its management to support the safe operations of the road.

ES 8.13.4 Predicted Net Effects and Determination of Significance

A change to visual landscape quality due to construction and operations of Project is predicted to occur. The net effect occurs in a resilient context given that vegetation in the project study areas is dominated by coniferous woodland and the Project Footprint would be partially or fully obstructed by surrounding vegetation. Land users who may be hunting, fishing, trapping or gathering in the area and doing recreational activities such as boating and canoeing, are transitory and may temporarily experience a visual effect while they are in vicinity of the project components.

With the implementation of the mitigation measures, the magnitude of the predicted net effects for changes to the visual landscape during the construction and operations phases is low to moderate. As a result, the net adverse effects for changes to the visual landscape are assessed as not significant.

ES 8.13.5 Cumulative Effects

For this Visual Environment VC assessment, the net effect in Section 18.5 that are characterized as having a likelihood of occurrence of “probable” or “certain” and magnitude that is higher than “moderate” are carried forward to the cumulative effects assessment. Net effects with this characterization are most likely to interact with other RFD and activities. Consequently, based on the predicted net effects (i.e., low) for the Visual Environment VC and likelihood of occurrence this VC was not carried forward to the cumulative effects assessment.

ES 8.13.6 Follow-up and Monitoring

Follow-up and monitoring activities recommended for the Visual Environment VC include:

- Visual inspections are proposed during the construction and operations of the Project to confirm mitigation measures are being implemented appropriately and verify net effects are as predicted.
- As ongoing engagement and consultation with Indigenous communities is proposed throughout the construction and operations of the Project this will also help to identify opportunities to address emerging concerns regarding changes to the visual landscape quality.

ES 8.14 Assessment of Effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights

ES 8.14.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights, the following identified subcomponents were examined in the assessment:

- Current and Historical Use of Lands and Resources for Traditional Purposes;
- Cultural Continuity (ability to practice and transmit cultural traditions including historical disruptions where Indigenous Peoples have a desire to reinvigorate a cultural tradition); and
- Impacts to the Exercise of Aboriginal and Treaty Rights.

ES 8.14.2 Existing Conditions Summary

To characterize the social existing conditions a mix of data collection methods approaches were applied, in conjunction with analytical frameworks that integrate information using various lenses or perspectives to deepen the understanding of social conditions. Data collection methods included secondary and primary data source research, combined with analytical framework considerations such as: Indigenous Knowledge, community knowledge, meaningful engagement and consultation, and GBA+. With respect to Indigenous Knowledge interviews, it was expressed that transference of Knowledge between Knowledge Keepers / Holders, Elders and Youth need to happen more often in order to set up Youth in a holistic way to help carry communities into the future. Cultural Knowledge is of utmost importance to Webequie in addition to Western education. Community profiles related to the social environment were developed through the data collection process.

ES 8.14.3 Potential Effects and Mitigation Measures

Project components and activities (e.g., road construction, grading, excavation, etc.,) may cause potential effects on Indigenous Peoples' and Impacts to the Exercise of Aboriginal and Treaty Rights. A summary of potential effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights -
Current and Historical Use of Lands and Resources Available for Traditional Purposes
Proposed Mitigation Measures During Construction and Operations ▪ Mitigations provided via other sections of EAR/IS on the biophysical environment of the Project area. ▪ Implementation of the CEMP and OEMP. ▪ Implementation of the CRP, including: ▫ Implementation of a community readiness working group.

Project Effects and Key Mitigation Measures: Effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights -
▫ Implementation of a stewardship and environmental management strategy. ▫ Implementation of community-led water monitoring. ▫ Implementation of community well-being monitoring. ▫ Engagement with resource and environmental management organizations. ▪ Providing access and adaptive management for harvesters throughout the construction phase and operations phase. ▪ Maintaining line of site for land users during construction phase activities. ▪ Engage with First Nations communities periodically to understand their harvesting schedules and cultural practices. ▪ Scheduling or planning timing of construction activities to avoid peak harvesting periods. ▪ Temporary access roads or detours to facilitate continued harvesting.
Sites and Areas Used for Traditional Harvesting **Proposed Mitigation Measures During Construction** ▪ Mitigations provided via other sections of EAR/IS on the biophysical environment. ▪ Implementation of the CEMP and OEMP. ▪ Implementation of the CRP, including: ▫ Implementation of a community readiness working group. ▫ Implementation of a stewardship and environmental management strategy. ▫ Implementation of community-led water monitoring. ▫ Implementation of community well-being monitoring. ▫ Protection of waterways and access and community-led water monitoring. ▫ Minimisation of disruptions to traditional land and water use. ▫ Providing accessible and available communication materials, in plain language, and translated as needed to community's Indigenous language. ▫ Establishing partnerships with organizations for Indigenous-led environmental justice and stewardship initiatives. ▫ Establishment of hunting database. ▫ Establish buffer zones around key harvesting areas to the extent possible for protection against any direct effects.
Access to Lands and Resources Used for Traditional Harvesting **Proposed Mitigation Measures During Construction and Operations** ▪ Mitigations provided via other sections of EAR/IS on the biophysical environment. ▪ Implementation of the CEMP and OEMP. ▪ Implementation of the CRP, including: ▫ Implementation of a community readiness working group. ▫ Implementation of a stewardship and environmental management strategy. ▫ Implementation of community-led water monitoring. ▫ Implementation of a community well-being and adaptive management plan. ▫ Exploring opportunities to enhance waterbody crossings through community driven initiatives. ▪ Providing accessible and visible communication materials (e.g., notices, signage, information boards). ▪ Timing of construction activities that may cause sensory disturbances outside of the wildlife movement patterns. ▪ Utilizing on-site controls to buffer the effect of sensory disturbances. ▪ Installing monitoring devices for sensory effects to track and alert construction workforce when above a set threshold. ▪ Establish seasonal restrictions on construction activities to avoid critical periods for wildlife, such as breeding or migration seasons.

Project Effects and Key Mitigation Measures: Effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights -

Cultural Continuity:

Sites and Areas Used for Cultural and Spiritual Purposes

Proposed Mitigation Measures During Construction and Operations

- Mitigations provided via other sections of EAR/IS on the cultural environment of the Project area.
- Implementation of the CEMP and OEMP.
- Implementation of the CRP, including implementation of a community readiness working group.
- Implementation of built heritage resources and cultural heritage landscapes and archaeological resources recommendations (See Section 20 of the EAR/IS).
- Use devices to muffle equipment and sensory disturbances.
- Determine need for potential field investigations and develop alternative noise mitigations.
- Blast controls and plan.
- Utilize setbacks, incorporate details into construction documents, determine exceptions (Webequie First Nation On-Reserve Land use Plan).
- Implementation of a community well-being and adaptive management plan.

Access to Lands and Resources Used for Cultural and Spiritual Purposes

Proposed Mitigation Measures During Construction and Operations

- Mitigations provided via other sections of EAR/IS on the cultural environment of the Project area.
- Implementation of the CEMP and OEMP.
- Implementation of the CRP, including:
  - Participation in on- the- land events, ceremonies, powwows, and festivals.
  - Creating / building a cultural centre that can be used to hold cultural programming, preserve and display important resources, youth drop-in centre, clubs.
  - Developing new powwow grounds that community members can use to hold ceremonies, gatherings, personal healing spaces, and for spending time with family.
  - Implementation of a community well-being and adaptive management plan.

Cultural Traditions or Practices, including Use and Preservation of Indigenous Languages

Proposed Mitigation Measures During Construction and Operations

- Mitigations provided via other sections of EAR/IS on the cultural environment of the Project area.
- Implementation of the CEMP and OEMP.
- Implementation of the CRP, including:
  - Supporting language enhancement and enrichment by promoting the learning of older language and terms to promote the survival of language, culture and traditions.
  - Supporting language programs by incorporating culturally relevant design into project, such as signage in Indigenous languages and digital resources.
  - Creating opportunities to integrate Indigenous Knowledge with modern culture to preserve and enhance cultural heritage.
  - Strengthening and sustaining cultural traditions, practices and knowledge transfer by supporting knowledge sharing between Elders and youth, allowing traditional teachings to be passed down across generations.
  - Enhancing opportunities for community members to engage in cultural activities.
  - Respecting and supporting cultural values through inclusive planning, integration of cultural practices in project planning.
  - Promoting awareness and appreciation of Indigenous culture among workers and stakeholders.
  - Implementation of a community well-being and adaptive management plan.

Project Effects and Key Mitigation Measures: Effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights -

Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights:

Current and historical use of lands and resources for traditional purposes

Proposed Mitigation Measures During Construction and Operations

- Mitigations provided via other sections of EAR/IS on the cultural environment of the Project area.
- Implementation of the CEMP and OEMP, including:
  - Air Quality and Dust Control Management.
  - Cultural Heritage Resources Management.
  - Construction Blasting Management.
  - Construction Traffic Management.
  - Construction Waste Management (including Hazardous, Contaminated and Controlled Materials).
  - Employment and Procurement Plan.
  - Environmental and Cultural Awareness and Education Plan.
  - Erosion and Sediment Control Plan.
  - Fish and Fish Habitat Management.
  - Groundwater Management.
  - Health and Safety Management.
  - Noise and Vibration Management.
  - Light Management.
  - Petroleum Handling and Storage.
  - Site Restoration and Monitoring.
  - Spill Prevention and Emergency Response Management.
  - Surface Water and Storm Water Management and Monitoring.
  - Soil Management.
  - Vegetation and Invasive Species Management.
  - Wildlife Management (includes species at risk).
- Implementation of the CRP, including:
  - Implementation of a community readiness working group.
  - Implementation of a stewardship and environmental management strategy.
  - Implementation of community-led water monitoring.
  - Implementation of a community well-being and adaptive management plan.

Cultural Continuity

Proposed Mitigation Measures During Construction and Operations

- Mitigations provided via other sections of EAR/IS on the cultural environment of the Project area.
- Implementation of the CEMP and OEMP.
- Implementation of the CRP.
- Implementation of a community readiness working group.
- Implementation of a stewardship and environmental management strategy.
- Implementation of community-led water monitoring.
- Implementation of a community well-being and adaptive management plan.
- Implementation of built heritage resources and cultural heritage landscapes and archaeological resources recommendations.

Project Effects and Key Mitigation Measures: Effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights -

Socio-economic, Health and Well-being

Proposed Mitigation Measures During Construction and Operations

- Implementation of the CRP, including:
  - An initiative is recommended to be developed for a dedicated childcare and youth services drop-in centre in the Webequie community that will provide support to family members that require childcare to participate in education and training programs and employment opportunities related to the Project.
  - Funding for a readiness and wellness centre in Webequie First Nation for health staff, Tikanagan, counselling services and program space.
  - Funding for an Elder's complex will help maintain cultural well-being during the construction phase and operations phase of the Project.
- Implementation of the CEMP and OEMP, including:
  - Air Quality and Dust Control Management Plan;
  - Construction Blasting Management Plan; and
  - Noise and Vibration Management Plan.
- Providing educational sessions to employees on mental health, substance abuse and addiction.
- Establishing a sobriety program for on-site employees of the community who are living with addictions, to invest in employee wellness.
- Emergency response and preparedness strategy.
- Road safety and traffic management strategy.
- Education, training and employment readiness strategy, including.
- Education and training initiatives for the Project.
- Workplace policies and procedures.
- Supporting traditional learning and cultural practices.
- Educational facility space in Webequie First Nation.
- Development of hiring policies and practices.
- Housing and infrastructure readiness strategy will include upgrades in Webequie First Nation.
- Economic development strategy and procurement enhancement strategy.
- Safety and security strategy for vulnerable community members, including:
- Developed in collaboration with community, government and community-based organizations (e.g. Native Women's Association of Canada) focused on the implementation of the recommendations of the National Inquiry into Missing and Murdered Indigenous Women and Girls (MMIWG), and other programs with related objectives.
- Working with government bodies on implementation of Ontario's strategy in response to the MMIWG National Inquiry's recommendations.
- Developing a grievance mechanism for community concerns and issues, inclusive of issues regarding racism, sexism, gender-based violence, and other issues.
- Consideration of services including police, sexual health, and gender-based violence services (e.g., shelters).
- Establishment of a group made of community members to function as Community Liaison Officers as part of the Project workforce during the construction phase, to bridge the gap between the community's needs and the Project's requirements and effects.
- Creating and implementing training programs focused on the safety of Indigenous women, girls and 2SLGBTQQIA individuals (covering issues like sexual harassment and sex trafficking) for all Project employees, both during construction and operation phases.
- Planning and implementing community workshops in the Webequie community and other participating communities to further engage women, youth, 2SLGBTQQIA individuals and other vulnerable groups in identifying needs and concerns in the community as well as potential mitigation measures.
- Establishing procedures and programs regarding drug and alcohol usage during Project work.
- Explore the province's program on Community Safety and Well-Being Planning, which involves working with multi- sectoral partners to proactively identify and address local priority risks to safety and well-being before they escalate.
- Implementation of a community well-being and adaptive management plan.

Project Effects and Key Mitigation Measures: Effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights -
Self-Determination and Self-Governance **Proposed Mitigation Measures During Construction and Operations** ▪ Implementation of the CRP, including: ▪ Implementation of a community readiness working group, consisting of Webequie First Nation community leaderships, community representatives (i.e., youth, Elders, women, vulnerable groups) to liaise with other Indigenous communities, contractors and government. ▪ Implementation of a community core capacity enhancement strategy. ▪ Implementation of a stewardship and environmental management strategy. ▪ Integration with regional assessment plan and other Indigenous communities in the LSA and RSA. ▪ Implementation of a community well-being and adaptive management plan.

ES 8.14.4 Predicted Net Effects and Determination of Significance

The predicted net effects and determination of significance on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights have not been determined at this time. Predicted net effects and determination of significance will be done collaboratively with the Indigenous communities and will be included in an Addenda to the final EAR/IS.

ES 8.14.5 Cumulative Effects

The assessment of cumulative effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights is to be determined. An evaluation of cumulative effects will be undertaken once the severity of potential adverse effects on Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty rights has been completed and will be included in an Addenda to the final EAR/IS.

ES 8.14.6 Follow-up and Monitoring

The proposed follow-up and monitoring program related to Indigenous Peoples and Impacts to the Exercise of Aboriginal and Treaty Rights will be provided in an Addenda to the final EAR/IS.

ES 8.15 Assessment of Effects on Cultural Heritage Resources

ES 8.15.1 Scope of the Assessment

Based on the potential effect pathways and effect indicators for the Cultural Heritage Resources VC, the following identified subcomponents for Cultural Heritage Resources were examined in the assessment:

- Build heritage resources (BHRs)/Cultural heritage landscapes (CHLs); and
- Archaeological resources.

ES 8.15.2 Existing Conditions Summary

Existing conditions for the Cultural Heritage Resources VC were established based on desktop review and engagement and consultation activities conducted for the Project. Detailed descriptions of the methods for desktop review and interpretations of the results are summarized in Section 20 and described in detail in Appendix S – Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment and Appendix T – Stage 1 Archaeological Assessment Report.

To characterize existing conditions of BHRs and CHLs in the project study areas, the Project Team (Archaeological Services Inc.) conducted the following key tasks: background document review and agency consultation; background historical research; review of Indigenous Knowledge and Land and Resource Use information; and preparation of an inventory of known and potential built heritage resources and CHLs within the project study areas.

ES 8.15.3 Potential Effects and Mitigation Measures

Project components and activities (e.g., road construction, grading, excavation, etc.,) may cause potential effects on the Project on Cultural Heritage Resources VC. A summary of potential effects on this VC and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Project Effects and Key Mitigation Measures: Cultural Heritage Resources VC
Built Heritage Resources (BHRs) / Cultural Heritage Landscapes (CHLs): The project may impact BHRs (e.g., old trapping or hunting camps, etc.) and / or CHLs (e.g., spiritual or symbolic sites of value or interest to Indigenous communities); Provincial heritage properties; and change sites or things of historical or cultural significance, oral histories, cultural values and experiences of being on the land. **Proposed Mitigation Measures During Construction and Operations** Mitigation measures may include, but are not limited to: ▪ Avoidance and protection. ▪ Alternative design or construction approaches. ▪ Monitoring by spiritual monitors trained by Elders in the community on what sites / areas to avoid. ▪ Relocation. ▪ Remedial landscaping. ▪ Documentation, where appropriate. ▪ Webequie First Nation Elders and Knowledge Holders, along with provincial guidelines, will be also consulted for advice on scope, methodology and approach in the development of appropriate mitigation measures. ▪ An Environment Committee will be established to facilitate communication and engagement during construction and operations of the Project. This Committee members will include Webequie First Nation Elders and Knowledge Holders, other Indigenous Nations, and appropriate project representatives, to: facilitate communication and engagement during construction and operations of the Project; facilitate use of Indigenous Knowledge in project activities; facilitate evaluation of land use information; and facilitate development of appropriate monitoring programs, protocols and management plans as it relates to Cultural Heritage Resources VC. ▪ Development of appropriate mitigation measures may require additional studies, such as Cultural Heritage Evaluation Reports (CHER) to evaluate the CHLs. If any potential resources are evaluated in the CHERs as being of CHVI, a Heritage Impact Assessment (HIA) will be completed and include mitigation measures. The HIA may also recommend that a Strategic Conservation Plan (SCP) be undertaken to guide protection and conservation of the specific cultural heritage resource. The CHER(s), HIA(s), and/or SCP(s) will be submitted for Ministry of Citizenship and Multiculturalism (MCM) and Indigenous communities for review and comment.

Project Effects and Key Mitigation Measures: Cultural Heritage Resources VC
Archaeological Resources: The project may affect the number and / or area (ha) of archaeological potential; number and / or area (ha) of archaeological sites associated with Indigenous communities affected; number or area (ha) of Euro-Canadian archaeological sites affected; and number / area(ha) / type of burial sites affected. **Proposed Mitigation Measures During Construction and Operations** ▪ Mitigation of archaeological resources may involve protection or avoidance or salvage excavation according to MCM Standards and Guidelines for Stage 4 Mitigation. ▪ Webequie First Nation Elders and Knowledge Holders will be consulted for advice on scope, methodology and approach in the development of appropriate mitigation measures.

ES 8.15.4 Predicted Net Effects and Determination of Significance

There are no predicted net adverse effects on the Cultural Heritage Resources VC after the implementation of mitigation measures. Potential effects during the construction and operations phases include direct or indirect impacts to BHRs, CHLs, and archaeological resources due to vegetation clearing, infrastructure development, and other project activities. These effects are expected to be fully mitigated through avoidance, protection, monitoring, documentation, and consultation with Webequie First Nation Elders and Knowledge Holders, as well as adherence to provincial guidelines. Additional mitigation measures will be developed as needed, based on further assessments and in collaboration with Indigenous communities.

Details of the characterization of predicted net effects on the Cultural Heritage Resources VC, including the determination of significance, are presented in Section 20 of the EAR/IS.

ES 8.15.5 Cumulative Effects

There are no predicted adverse net effects identified for the Cultural Heritage Resources VC. Consequently, the Cultural Heritage Resources VC was not carried forward for assessment of cumulative effects.

ES 8.15.6 Follow-up and Monitoring

A follow-up and monitoring program related to Cultural Heritage Resources VC will be developed as part of the CEMP and OEMP with inputs from further engagement and consultation with Ministry of Citizenship and Multiculturalism, Webequie First Nation, and other Indigenous communities and will address regulatory requirements of the *Ontario Heritage Act*. The CEMP and OEMP will include a Cultural Heritage Resources Management Plan with procedures and protocol when encountering unexpected cultural heritage resources during ground disturbance (i.e., Cultural Heritage Finds Contingency Plan). The Cultural Heritage Finds Contingency Plan will give on-site personnel information to identify cultural heritage materials if encountered in the construction or maintenance area, procedures for notification and reporting the find, and actions to follow to protect the site from impacts.

ES 8.16 Follow-up and Monitoring Programs

The purpose of the follow-up and monitoring programs is to assess the effectiveness of mitigation, verify predicted effects in the EAR/IS, and to document compliance with commitments and obligations made during the EA/IA for Project. Many component management plans of the CEMP and the OEMP will have monitoring and reporting requirements, either as a condition any Notice of positive decision under the EA Act and IA Act and other permits, licenses and approvals. Once fully developed, the component management plans of the CEMP and OEMP will include details of monitoring and reporting.

ES 8.16.1 Scope of the Follow-Up and Monitoring Programs

Monitoring activities are designed to:

- Verify environmental effects predictions made during the EA/IA for the Project.
- Provide data with which to evaluate the effectiveness of mitigation measures undertaken.
- Provide data with which to implement adaptive management measures for improving future environmental protection activities.
- Document additional measures of adaptive measures to improve future environmental protection activities.
- Document compliance with stated commitments / obligation in EAR/IS and conditions in positive decisions under the Ontario Environmental Assessment Act and federal Impact Assessment Act, and other regulatory permits, approvals or authorizations.

Results from the monitoring and follow-up programs will be provided as appropriate to Indigenous communities and groups, the public, government agencies, and stakeholders. The proponent and its consultants will consider the results from the monitoring and follow-up programs and input received from Indigenous communities, regulators and others in its review of the status of the environmental protection activities on an ongoing basis, and amend programs as necessary. If the monitoring programs identify any unforeseen environmental effects or the environmental protection measures are not performing as intended, the proponent will consult qualified professionals, Indigenous communities, and appropriate regulatory authorities for recommendations on amendments. The proponent will make final decisions on adjustments to environmental activities.

An adaptive management approach will be followed whereby lessons learned and improvements identified during the inspection, monitoring and follow-up programs will be applied to continually improve subsequent environmental protection activities. The proponent will also monitor the application of action plans and emergency response procedures for environmental protection and human health and safety.

Environmental Monitor(s) will include both qualified specialists and Indigenous experts with local knowledge and will be tasked with monitoring construction and operations activities and the effectiveness of the proposed mitigation and enhancement measures and to verify predicted effects.

Further details on the proposed follow-up and monitoring programs for the Project are presented in Section 22.

ES 8.17 Accidents and Malfunctions

ES 8.17.1 Scope of the Assessment

Accidents and / or malfunctions are unplanned events, which are not indicative of the intended activities associated with construction or operation of WSR. An accident is an unexpected occurrence or unintended action, such as human error or natural events, which present the potential for negative (adverse) effects on the environment. A malfunction is defined by the failure of an engineered device or system (e.g., a device, piece of equipment, infrastructure) that must function as intended to prevent negative (adverse) effects on the environment. For any well designed and planned development project, unintended accidents and malfunctions are a rare event; however, the potential occurrence must be considered and prepared for. By analysing plausible accident and malfunction scenarios for the Project, risk factors, potential environmental effects and preventative planning can reduce the severity of such an event if it were to occur, thereby increasing readiness and assurance of assessed environmental predictions.

ES 8.17.2 Description of Accident and Malfunctions

Plausible accident and malfunction scenarios were identified for the Project Team by considering development components, activities, conditions or mechanisms of release, and known risks for similar scale highways. Project components and activities were based on Section 4: Project Description of the EAR/IS, which were used to identify plausible worst-case scenarios and mechanisms of release for accidents and malfunctions. Event scenarios were also based on knowledge of the Project and past professional experience regarding road engineering, construction practices, and performance for road developments of a similar standard, size and scale. Lastly, plausible event scenarios were required to have measurable pathways of effects to assess relevant VCs. Event scenarios associated with potential adverse or net effects following an accident or malfunction were further qualified by whether the Project had jurisdiction and mandate to directly manage or mitigate outcomes.

The following events were considered plausible for the assessment of Project accidents and malfunctions:

- Accidental releases of hazardous materials;
- Fires and explosions;
- Structural failure; and
- Vehicle or equipment accidents.

ES 8.17.3 Potential Effects and Mitigation Measures

A summary of potential accidents and malfunctions and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Description of Potential Accident or Malfunction and Project Mitigation Measures
Spills of Hazardous Materials: Accidental release of a hazardous material due to on-site storage, handling, dispensing, use of motor vehicles, and / or disposal activities, resulting in an unintended release to the terrestrial or aquatic environment. Mitigation Measures ▪ Preventive Measures: Spill Prevention Plans / Proper storage / Training / Secondary Containment / Regular Inspections. ▪ Vehicle and Equipment-Specific Measures: Maintenance / Emergency Kits. ▪ Emergency and Risk Response: Immediate Containment (including Cleanup Procedures).
Fires and Explosions: An accidental fire or explosion originating from project equipment or personnel. Mitigation Measures ▪ General Mitigation Measures: Compliance with Regulations / Safety Awareness / Proper Labeling and Storage / Explosives Management. ▪ Vehicle and Equipment – Specific Measures: Fuel Transportation and Storage / Fire Suppression and Safety Equipment / Construction and Installation / Collision Prevention. ▪ Operational Measures – Fuelling and Handling. ▪ Burning Management Measures. ▪ Emergency and Risk Response.
Structural Failure: Failure of a bridge, culvert or road surface. Mitigation Measures ▪ General Mitigation Measures – Structural Integrity: Construction Phase Mitigation Measures/Post-Construction Measures – Operations and Maintenance.
Vehicle or Equipment Accidents: Vehicle accident involving project staff during construction, operations or maintenance. Mitigation Measures ▪ Construction Phase Mitigation Measures as outlined in EAR/IS. ▪ Post-Construction Measures – Operations as outlined in EAR/IS. ▪ Emergency Preparedness and Response.

ES 8.17.4 Risk Summary and Evaluation

Potential accident and / or malfunction scenarios were based on the design and intended use of the Project. The plausible accident and / or malfunction scenarios and mitigations are described in Section 23 of the EAR/IS. After considering the use of planned Project mitigations, potential effects to VCs were described for each accident or malfunction event and were assigned likelihood and consequence ratings, within the context of predicted magnitude and duration of effects. Identification of the accident or malfunction's interaction with VCs were informed by considering VC pathways of effects, the proposed Project design, engineering design and safety standards, mitigation commitments and professional opinion that is based on the performance of similar Projects. A risk evaluation is presented as part of the analysis that provides a summary of findings from the accident or malfunction assessment, which is based on potential interactions with VCs and potential risk determination. Adverse effects following accidents and malfunctions is possible; however, the implementation of proposed mitigation measures is aimed at the reduction of these risks for people and the environment. After taking into consideration Project design and safety measures and risk evaluation findings, there is low risk for accidents and malfunctions that could result in net effects on Project VCs.

ES 8.18 Effects of the Environment on the Project

ES 8.18.1 Scope of the Assessment

The assessment of effects of the environment is a requirement of the federal TISG for the WSR and examines how local environmental conditions and natural hazards, such as severe or extreme weather conditions and external events, could adversely affect the Project, including proposed mitigation measures to eliminate or reduce potential adverse effects. Changes in the environment have the potential to affect the Project during both the construction and operations phases, particularly climate change effects that are more likely to be pronounced during the operations of the Project which is anticipated to be 75 years based on the expected timeline for when major refurbishment of road components (e.g., bridges) are anticipated.

ES 8.18.2 Climate and Environmental Hazards That May Affect the Project

As described in the Natural Environment Existing Conditions Report (Appendix F) and the Climate Change Resilience Review Report (Appendix I), there is low potential for geological hazards (such as seismic activities, landslides, sinkholes, and slope instability) in the study area for the project and potential effects of geological hazards on the Project are not anticipated. Based on information presented in the Climate Change Resilience Report, hazards and conditions that result from extreme weather events or changing climate trends which are deemed to have possible consequences on the Project include:

- Thick fog conditions;
- High-intensity short-duration rainfalls;
- Blizzards;
- Long-duration freezing rain (ice accumulation);
- Freeze-thaw cycles;
- Rain on snow events;
- Wind gust events;
- Permafrost degradation;
- Spring and torrential freshets; and
- Wildfires.

Other potential hazards such as heatwaves, extreme temperatures, extreme cold spell, and others are not anticipated to have significant interactions with project components as described in Section 24 of the EAR/IS.

Effects of the environment on the Project may result in accidents or malfunctions such as construction and road accidents, or wildlife interactions. Extreme weather events such as persistent rain (causing flooding) at or near the road may displace wildlife that potentially seek refuge resulting in potential interactions of wildlife with project components and workers.

ES 8.18.3 Potential Effects and Mitigation Measures

The primary proposed mitigation measure to address potential effects of the environment on the Project include engineering design solutions that will allow the project components to sustain or adapt to current and future projected environmental conditions and events. A summary of potential effects of the environment on the Project and the proposed key mitigation measures to eliminate, reduce, control, or offset potential adverse effects during the construction and operations phases of the Project are as follows.

Climate and Environmental Hazards, Mitigation Measures by Project Phases and Risk Ratings
Thick fog conditions: Construction and Operations (Low Risk) ▪ Fog is not known to be particularly severe in this area and is expected to occur on a seasonal basis. Shutting down construction activities or road closures will be done under severe cases. ▪ Thick fog reduces visibility on the road and can be hazardous for road users and construction and maintenance workers.
▪ Workers are expected to take appropriate precautions in their Health & Safety Plan or shut down activities to reduce or eliminate the potential for accidents due to thick fog. ▪ The WSR layout is designed with standard lane widths and geometry, and the road profile has very limited grade variations. The presence of rest areas along the road allows the drivers to stop if needed. The 35 m ROW and road geometry also allows for maximized visibility and site lines given the conditions.
High-intensity short-duration rainfalls: Construction and Operations (Low Risk) ▪ The WSR layout is designed with standard lane width, curves and low grades. ▪ Workers are expected to take appropriate precautions in their Health & Safety Plan or shut down activities to reduce or eliminate the potential for accidents due to poor conditions (reduced visibility or slippery surface) from heavy rain. ▪ All waterbody crossing structures are sized to convey a minimum 100-year design flow (probable rainfall event within 100-year period) after accommodating for increases in rainfall intensities due to climate change. This proposed design standard exceeds Ontario Ministry of Transportation of Ontario (MTO) Highway Drainage Design Standards and include consideration of climate change with increased duration, frequency and intensity of precipitation. ▪ The road embankment will be constructed according to provincial standards with efficient water drainage system (i.e., ditches and swales draining to streams) and ponding and slippery conditions on the road are not expected. The presence of asphalt or chip seal on the road surface will also helps to prevent surface damage with water, and the associated hazard. ▪ Weaken structural integrity of the road embankment due to heavy rainfall can form potholes of road surface and / or slumping of embankment slopes of which can managed through routine maintenance and repair activities. ▪ Equalization cross-culverts will be installed at appropriate intervals along the road to allow for water to pass from upstream to downstream and prevent water levels from rising or ponding on one side of the road. Furthermore, cross-culverts will be oversized to reduce potential for blockage and allow for easier maintenance. ▪ When run-off is high, the flow into receiving streams can cause localized damage (including erosion and sedimentation) and can be addressed by the operation and maintenance crews. ▪ Stormwater quantity and quality analyses completed in the preliminary design phase will be finalized in detail design to ensure surrounding waterbodies can accommodate discharge from events. ▪ As per provincial regulations, the WSR will be designed to handle stormwater within the road ROW and is not expected to impact areas where harvesting of country foods (e.g., wild berries) occurs. Also, trapezoidal ditches will be constructed to accommodate road drainage and run-off. Operation and maintenance crews will regularly inspect ditches for issues and schedule repairs, as needed.

Climate and Environmental Hazards, Mitigation Measures by Project Phases and Risk Ratings
▪ The drainage system consisting of ditches, culverts and bridges will be sized to address projected climate change. Storm events that may exceed capacity of the drainage system and cause localized flooding into streams is not considered probable. Localized flooding is anticipated to recede quickly given that culverts will be sized accordingly with allowance for climate change. Erosion controls like riprap (rock) may be placed around structures to reduce the long-term damage potential erosion. ▪ If flooding occurs, it could impact the upstream section of watercourse at culvert crossings, although it is predicted to remain limited and localized (considering the incorporation of projected climate change into the project design) and can be reversed naturally or with help from the operation and maintenance crews. Depending on event and location, the extent of damages may be variable. ▪ Heavy rainfalls and run-off may erode surface soil from rehabilitated sites. Erosion is however expected to be limited after new vegetation becomes established. ▪ Excess sediments and objects deposited into roadside ditches can slow down drainage, but this is expected to be limited. Operation and maintenance crews are expected to make routine inspections and will maintain the ditches for conveyance of drainage.
Blizzards: Construction and Operations (Very Low to Low Risk) ▪ Workers are expected to take appropriate precautions in their Health & Safety Plan or shut down activities to reduce or eliminate the potential for accidents. ▪ The WSR layout is designed with standard lane width, curves and low grades. Winter snow fencing may be installed in areas more prone to snow drifts occurring on the road to minimize risk to road users. ▪ Workers are expected to take appropriate precautions and use appropriate lights and signs to address visibility and safety concerns during blizzards. Low priority maintenance activities can be postponed eliminating the potential for accidents due to blizzards.
Long-duration freezing rain (ice accumulation): Construction and Operations (Low Risk) ▪ Workers are expected to take appropriate precautions in their Health & Safety Plan or shut down activities to reduce or eliminate the potential for accidents. ▪ The WSR layout is designed with standard lane width, curves and low grades. ▪ Icy conditions on the road are hazardous for drivers and road maintenance workers. Road maintenance vehicles (i.e., snowplows) will be equipped to operate in these conditions. Low priority maintenance activities can be postponed eliminating the potential for accidents. ▪ Operation and maintenance crews may spread sand to increase traction on the road surface. The proposed road surface treatment of chip seal or asphalt are also easier to maintain than aggregate roads. ▪ Traffic is expected to be very low during poor driving conditions. Operation and maintenance procedures are considered adequate for potential extreme events. ▪ Freezing rain can lead to slippery conditions and ice buildup on roofs or icy walkways which can be hazardous for workers at the Maintenance and Storage Facility. Workers are expected to mitigate safety concern in their Health & Safety Plan and take proper precautions. Low priority work activities can be postponed eliminating the hazards.
Freeze-thaw cycles: Operations (Low Risk) ▪ Repeated freeze-thaw cycle can destabilize the soil and gravel material around culverts which will however be designed and constructed according to codes to minimize heave or destabilization. ▪ The road embankment is designed according to provincial standards and groundwater is predicted to flow underneath the road. The embankment will be properly drained with subdrains if needed, to reduce the effects of freeze-thaw cycles. ▪ The MSF buildings and structures will be designed and built to Ontario Building Codes, and other applicable standards. Cracks in the foundation can be severe in extreme cases leading to uneven floors and doors that may require moderate repairs. ▪ All bridges will be designed according to provincial standards with regard to freeze-thaw degradation of concrete.

Climate and Environmental Hazards, Mitigation Measures by Project Phases and Risk Ratings
Rain on snow events: Construction and Operations (Very Low Risk) ▪ Workers are expected to take appropriate precautions measures as outlined in their Health & Safety Plan with regard to slippery conditions due to presence of ice on ground or shut down activities to reduce or eliminate the potential for incidents. ▪ The WSR layout is designed with standard lane width, curves and low grades. Operation and maintenance staff will clear snow according to standards and procedures in the Health and Safety Plan. ▪ The presence of snow in ditches may increase run-off drainage and potentially create very localized flooding. Performance of the ditches and / or culverts may be affected but this impact is not expected to be long-lasting. In such events, operation and maintenance crews are expected to clear the snow to alleviate any issue. ▪ Road maintenance vehicles (i.e., snowplows) are equipped to operate in rain and snow events. Workers are expected to take appropriate precautions and use appropriate lights and signs for safety. Low priority maintenance activities can be postponed eliminating the potential for incidents.
Wind and gusts events: Construction and Operations (Very Low to Low Risk) ▪ Small injuries may occur from flying dust or debris during wind gust events but is dependent on the severity of the event. Workers are expected to take appropriate precautions in their Health & Safety Plan or shut down activities to reduce or eliminate the potential for incidents. Large debris is not expected at the MSF as long as the facility is operated and maintained following best management practices. ▪ Most equipment at quarries is heavy and / or must be solidly anchored during operation or inactivity. Workers are also expected to take appropriate precautions during extreme wind conditions. ▪ Although cross winds can be a safety hazard to drivers, the road will be designed and the ROW managed to eliminate physical hazards (e.g., trees in close proximity to road), and where applicable safety guiderail will be placed along the road where standards dictate their use. ▪ The MSF building and outside supportive structures will be designed and built to Ontario Building Codes, and other applicable standards, to prevent damage from high winds. With the exception of these buildings, no elevated structures (e.g., communication towers and electrical lines) vulnerable to wind will be constructed. Damaged materials (if any) are not expected to be of high value and can easily be replaced.
Permafrost degradation: Operations (Low Risk) ▪ Geotechnical investigations to date have not identified the presence of permafrost under the road footprint and as such the potential for permafrost degradation is expected to be low. Any permafrost encountered during construction will be addressed at that time. Therefore, sinkholes or road fractures and/or settlement due to permafrost are not expected. ▪ Further geotechnical studies at MSF location will be carried out to verify the presence of permafrost underneath the facility footprint and design and / or construction may be modified to address potential impacts.
Spring and torrential freshets: Operations (Low Risk) ▪ The absence of flashy streams associated with large abutting impervious areas to a road reduces the probability of occurrence as well as potential damages. ▪ The road users can avoid driving into a flooded area of the road and there is low probability that severe flooding incidents will result in a closure of the road. ▪ Given the posted speed limits and driver adjustment to weather conditions, the impact on the health and safety of the drivers should be limited, although risk may increase depending on the extent of flooding. ▪ The road is to be elevated at sufficient height relative to the original ground that would prevent water from rising over the road surface (overtopping). Furthermore, surface water modelling has determined the appropriate sizing for drainage components (e.g., ditches, culverts). The presence of geotextile and geogrid and permeable granular material under the road is expected to help with drainage and stabilize the roadbed, including conveyance of groundwater flow. ▪ Excess sediments and objects deposited into road ditches after freshets near streams can slow down or obstruct drainage but this is expected to be limited and localized. Operation and maintenance crews are expected to make routine inspections and maintain the ditches. ▪ Bridges will be sized to accommodate the 100-year storm plus projected climate change. The rise of water to or above the bridge deck is considered unlikely to occur.

Climate and Environmental Hazards, Mitigation Measures by Project Phases and Risk Ratings
▪ The bridges will be located on streams and waterbodies that have low flow velocities and are not configured or designed to generate high water velocities during freshet events. Lower velocities are not expected to damage bridge decks (or culverts) to an extent that would require reconstruction. ▪ Like bridges, culverts will be sized to convey the 100-year storm and projected climate change. Flows that exceed the capacity of culverts is unlikely to occur. The design of culverts has also considered unwanted infiltration of water into the soil that could potentially move and / or damage a culvert. Operation and maintenance crews will systematically clean culverts following freshets.
Riverbank erosion due to heavy rainfalls: Operations (Very Low to Low Risk) ▪ Being elevated, the road embankment is subject to erosion over time in presence of water but drainage cross-culverts and other appropriate erosion control design measures at waterbody crossings are expected to minimize erosion potential. ▪ Erosion is typically a slow process that should not create excessive damage to the road but would need regular maintenance work to proactively prevent problems over time. Operation and maintenance crews are expected to inspect the road and intervene if necessary. ▪ Local erosion of the road embankment can impact adjacent wetlands or other sensitive features with aggregate or sediment deposited at some isolated locations. However, the road design including equalization cross-culverts, and the drainage design to manage run-off should limit the potential for erosion. Erosion and potential deposition of sediment into wetlands and other features would be localized and reversible with the intervention of operation and maintenance crews. ▪ Riverbanks near the bridges will be revegetated and / or have erosion control measures (e.g., rock / rip rap) following construction to prevent and limit erosion over time. Erosion control mitigation measures will only use clean non-erodible materials below the high-water mark and that revegetation will only be used above the high-water mark. Operation and maintenance crews are also expected to routinely inspect bridge and culvert structures and upstream and downstream riverbanks for signs of erosion and complete repairs where required. ▪ Scour caused by bridge piers and / or abutments in the water could affect the normal flow of a waterbody, however but this has been addressed during design and is not expected to be a major concern. Operation and maintenance crews are also expected to inspect these areas and intervene if necessary. ▪ The presence and deposition of sediments overtime may affect the flow through culverts. This potential occurrence will be managed by operation and maintenance staff in accordance with provincial standards.
Wildfires: Construction and Operations (Low Risk) ▪ Wildfire risks on the eastern part of the WSR are anticipated to be low as the peatlands is saturated with primarily scattered low-lying vegetation that is not considered very flammable. For the western part of the WSR, the 35 m ROW to accommodate the road should provide sufficient clearance from potential burning trees falling on the road surface. As such, damage to the road due to a wildfire is expected to be limited, but smoke and intense wildfires could cause cracks and potholes on the road surface due to heating or require temporary road closures or lane restrictions. ▪ Other road components that are made with metal such as road signs, guardrails and culverts are more susceptible to damages from heat and may require repairs following a wildfire event. The risk is also applicable to bridges composed of concrete and steel that may be impacted by heat associated with wildfires.

The following hazards were excluded from the risk analysis mainly due to an absence of an interactions or potentially significant interactions with any project components:

- Heatwaves and extreme hot temperatures;
- Hail of large dimensions;
- Lightning storms;
- Extreme cold spell;
- Topsoil droughts;
- Hydrological droughts;
- Sinkhole formation from droughts;

- Freezing depth;
- Tornado / downburst / derecho;
- Ice breakup season; and
- Landslide / rockslide.

ES 8.18.4 Significance Determination

For effects of the environment on the Project, a net effect is considered significant if it is predicted to be either of the following: Irreversible and of high magnitude; or Reversible, but long-term or permanent in duration, and of high magnitude.

Based on the characterization of net effects described in Section 24.5 there are no ratings of a net effect of the environment on the Project that are expected to be irreversible and of high magnitude, or reversible with long-term or permanent duration and of high magnitude. Therefore, a damage to project components or a delay in the project schedule as a result of effects of the environment on the Project is considered to be not significant.

ES 8.18.5 Follow-up and Monitoring

Follow-up and monitoring on effects of the environment on the Project will be integrated as part of the CEMP and OEMP that will be developed for the Project and includes implementation of post-construction monitoring procedures and reporting. Follow-up and monitoring activities will include, but are not limited to, the following:

- Monitor implementation of the proposed risk control and mitigation measures during construction and operations;
- Regularly inspect and evaluate the integrity of the project components;
- Inspect and repair project components as warranted after extreme weather events; and
- Implement adaptive management to mitigate climate risks, depending on future climate projections.

ES 8.19 Project Effects in the Context of Canada's Ability to Meet Its Environmental Obligations and Its Climate Change Commitments

ES 8.19.1 Context

As a requirement of the federal Impact Assessment, the proponent is to describe how the Project's effects may contribute or hinder Canada's ability to meet its obligations (e.g., related to biodiversity), including climate change commitments to achieving net-zero emissions by 2050 as contained in the *Canadian Net-Zero Emissions Accountability Act* (2021). In addition to presenting the proponent's view, the EAR/IS has made efforts to include how Indigenous communities and groups and / or Indigenous Knowledge was

incorporated in assessing whether the Project presents a contribution or a hindrance to meeting these obligations / commitments.

ES 8.19.2 Federal Environmental Obligations and Commitments

The following are federal environmental obligations and commitments that were considered in the assessment:

- Convention on Biological Diversity and Canada's supporting national framework (e.g., Canadian Biodiversity Strategy, Canada's Biodiversity Outcomes Framework and current Biodiversity Goals and Targets for Canada); and legislation that supports the implementation of Canada's biodiversity commitments, including the *Species at Risk Act* (2002), and the *Canada Wildlife Act* (1985), as well as supporting guidance.
- Recovery Strategies and Action Plans developed under the SARA for all species at risk potentially affected by the Project. Of particular importance under SARA for this Project is the "2019 Proposed Amended Recovery Strategy for Woodland Caribou (Rangifer tarandus caribou), Boreal Population, in Canada" Far North range, and smaller ranges within that range, as identified by the Province of Ontario.
- Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar), as implemented in part through the Federal Policy on Wetland Conservation (1991) and supporting guidance, such as the North American Waterfowl Management Plan.
- Convention for the Protection of Migratory Birds in the United States and Canada, as implemented in part through the Migratory Birds Convention Act (1994) and supporting guidance on conservation objectives arising from Bird Conservation Region Strategies.
- The Canadian Net-Zero Emissions Accountability Act with respect to transparency and accountability in Canada's efforts to achieve net-zero greenhouse gas emissions by the year of 2050.

ES 8.19.3 Characterization of Net Effects and Assessment of Obligations

It is not expected that project related net effects on Fish & Fish Habitat, Vegetation and Wetlands, and terrestrial and aquatic species at risk will hinder Canada's ability to meet its obligation to the Convention on Biological Diversity. It is also not expected that the Project related net effects on Vegetation and Wetlands will hinder Canada's ability to meet its obligation to the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar).

The effects form the Project on migratory songbirds are predicted to be not significant. It is not expected that project related net effects will hinder Canada's ability to meet its obligation to the Convention for the Protection of Migratory Birds in the United States and Canada, as implemented in part through the Migratory Birds Convention Act (1994).

The Project's Greenhouse Gas (GHG) emissions estimated for construction and operation phases represent a small contribution to provincial and national GHG emissions. The GHG emissions are ranked as negligible to low in magnitude during the construction and operation phases. Based on these results

the net effects are predicted to be not significant and are not expected to hinder Canada's ability to meet its obligations under the *Canadian Net-Zero Emissions Accountability Act*.

ES 8.20 Project Contributions to Sustainability

ES 8.20.1 Sustainability in Planning and Design

Webequie First Nation made the decision to move forward as the proponent of the WSR in 2019, as it viewed the Project as a means to provide better service to the community, provide economic development opportunities for resident members and local businesses within the traditional territory, and provide an opportunity open a path to critical minerals development in the McFaulds Lake area. Throughout the planning and design of the Project, the proponent has made the commitment to achieve sustainable outcomes as identified in the EAR/IS through:

- Taking a long-term planning approach to planning (preliminary engineering, engagement and consultation, assessment of alternative means to the undertaking) (Section 3);
- Implementing Seven Generations teachings via community plan development (Section 26.4);
- Commitments to improving the quality of life for present and future generations (Section 26.5.2);
- Developing climate resilient infrastructure, as assessed through climate resiliency assessment (Appendix I);
- Assessing and mitigation planning to minimize environmental impacts to air, water, land, vegetation, fish and wildlife (Sections 6 to 13);
- Assessing and mitigation planning to minimize impacts to land use, historic and cultural impacts (Sections 16, 19, 20);
- Assessing and mitigation planning to minimize impacts to social, economic and health (Sections 14, 15, 17, 18);
- Assessing and mitigation planning to address the potential for cumulative effects (Section 21); and
- Mitigation measures and CEMP and OEMP in Appendix E of the Draft EAR/IS.

ES 8.20.2 Sustainability Principles

The following sustainability principles were considered when assessing the effects of the Project:

- Principle 1: Consider the interconnectedness and interdependence of human-ecological systems: relationships exist between the Project VCs in alignment with Webequie First Nation views on the human-ecological interconnectedness and interdependence with lands, water, fish and wildlife populations and natural resources.
- Principle 2: Consider the well-being of present and future generations; the addition of the WSR to the region is a means to maintaining and improving the well-being of the present and future generations. The implementation of all-season roads in the region will result in the movement of people between communities and enable a more integrated economy.
- Principle 3: Consider positive effects and reduce adverse effects of a designated project; the Project assessment has identified both adverse and positive effects on all VCs. Through the EAR/IS, Webequie First Nation has committed to implementing a suite of mitigation measures and design

considerations aimed at reducing adverse effects from the Project, utilizing the mitigation hierarchy (avoidance, minimization, restoration and off-setting). Anticipated positive effects of the Project include social, educational and economic.

- Principle 4: Apply the precautionary principle and consider uncertainty and risk of irreversible harm: Webequie First Nation adopted a conservative approach when assessing the Project's potential adverse effects on VCs, outlining uncertainties in analysis and assumptions of the analysis. To address Project effects and associated uncertainties, a robust mitigation hierarchy was applied to each VC which established impact avoidance as a priority, and social or environmental off-setting of any residual impact (i.e., after the application of mitigation strategies) as a last measure.

ES 8.20.3 Conclusion

Webequie First Nation has taken into consideration the sustainability principles outlined in the TISG and the in-progress/early version Webequie First Nation Draft Community-Based Land Use Plan (2019) throughout Project planning. For nearly a decade, Webequie has engaged communities and stakeholders on their issues of importance which established the basis of VC selection for the EA/IA and studies that have taken place to date.

The precautionary principle was applied to the EA/IA, utilizing best practice in environmental assessment methods, recognition of interdependencies and interconnectedness between the VCs, consideration of adverse effects and the application of the mitigation hierarchy for all VCs, identification of positive effects through Webequie First Nations' commitments to social enhancement programs for community well-being and safety. Furthermore, through the assessment of alternative means and preliminary engineering, Webequie has arrived at a preferred route that has measurably factored in social and economic benefits, impacts to the environment, impacts to culture and ATRI. These criteria were prominent in selecting the preferred route of the Project and were in keeping with the Webequie's in-progress/early version Draft Community-Based Land Use Plan. Webequie First Nation is committed to sustainable development on this Project by facilitating economic growth in the region; preserving natural resources and achieving biodiversity net gains; creating educational, training and employment opportunities for the local communities to meet the economic demand; and enhancing the health and social well-being of community residents through an improved economy.

ES 8.21 Assessment Conclusions

This section provides an overview of the conclusions of the coordinated Ontario Environmental Assessment and Canada Impact Assessment for the proposed Webequie Supply Road Project, including the advantages and disadvantages of proceeding with the Project.

ES 8.21.1 Overview of the Process

This Draft EAR/IS has been prepared to fulfill the requirements of the Canadian IA Act and the Ontario EA Act and is also intended to meet the requirements in the federal TISG and EA ToR.

The EA/IA for the Project has assessed the effects of the WSR on 14 valued components, the rights and interests of First Nations and 4 other factors as specified in the IA Act, TISG, and approved EA ToR. The scope of the assessment also considered the concerns and issues raised during Webequie First Nation's

engagement and consultation with Indigenous communities and groups, the public, government agencies, and stakeholders, throughout the EA/IA process. The 22 Indigenous communities that have been consulted as part the EA/IA for the WSR are identified in Section 2 of the EAR/IS – Engagement and Consultation Summary, including details of the activities undertaken and feedback received from communities.

The design of the Project was directly influenced by the values of Webequie First Nation and the objective to minimize adverse effects on the local environment and maximize socio-economic benefits. The design of the Project also considered the views and feedback received from other Indigenous communities, the public, government agencies, and stakeholders.

ES 8.21.2 Existing Conditions and Effects Assessment

Natural environment, social, economic and health studies were completed by technical disciplines to document the existing conditions and assess the effects of the Project. A total of 17 technical disciplines under the 14 valued components were considered in the EAR/IS. Considering the input received from engagement and consultation, each technical discipline used existing conditions information and description of anticipated construction and operation activities to determine the potential interactions between the WSR and the environment. After the potential interactions were determined, potential effects were identified, and strategies and measures to avoid or mitigate the adverse effects were identified and examined by the Project Team. Mitigation are methods or approaches to eliminate, reduce, control or offset the potential adverse effects of the Project on the environment. The effects assessment also looked at strategies and measures to enhance the positive benefits of the Project, such as those related to social, economic and health conditions.

Through the appropriate use of mitigation measures (refer to Appendix E [Mitigation Measures], Appendix N [Community Readiness Plan] and those identified in Sections 6 through 21), the potential effects, including cumulative effects, from the construction and operations of the WSR are predicted be effectively managed, minimized, or mitigated. With implementation of mitigation and management measures, the overall net effects of the Project with consideration of the positive socio-economic benefits from the Project are not anticipated to result in significant adverse effects. However, there are some potential effects where the risk of occurrence may have significant consequences based on the unique challenges and vulnerabilities faced by Indigenous communities that are more susceptible to certain negative social effects due to historical and systemic inequalities. These effects can stem from factors like colonialism, discrimination and disparities in access to health care services. Potential social and health effects of this nature for the Project include community well-being and safety, particularly the safety and security of women and girls, and substance use. Therefore, enhanced mitigation and monitoring are proposed for these potential effects to manage and prevent significant adverse effects. In addition, the assessment concluded there are predicted significant net effects to Species at Risk and specifically changes to predator-prey dynamic for Caribou that may result in injury or death, and habitat loss for Wolverine.

ES 8.21.3 Advantages and Disadvantages

In accordance with the Ontario Ministry of the Environment, Conservation and Park's Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario (MECP, 2014), an EA should describe the process for evaluating alternatives and then choosing a preferred alternative, which will become the undertaking for which approval is sought. The evaluation of "alternatives to" the Project and "alternatives means" to carrying out the Project is also required under the Canada IA Act by the IAAC. The evaluation

is a trade-off process in which the advantages and disadvantages to the environment of the alternative courses of action are weighed in terms of their effects, both positive and negative on the environment.

In the case of this Project, the approved ToR indicates that the EA will not include an assessment of "alternatives to" except for the "do nothing" alternative. The rationale for proceeding in this manner was that the ToR documented the evaluation of "alternatives to" the Project which led to the identification and justification for the Project or preferred "Alternative to" the undertaking. In accordance with the EA Act and IA Act, the assessment includes the evaluation of the advantages and disadvantages of proceeding with the undertaking (the Project) against the "do nothing" or null alternative.

Proceeding with the Project is predicted to produce net effects to the environment, health, social and economic conditions. Based on the Project Description (Section 4) prepared at the time of submission of this report, the existing environment and considering the implementation of the mitigation measures described in Sections 6 to 20 and Appendix E, the net effects associated with the Project can be effectively mitigated by standard and site-specific environmental protection measures. Consequently, overall, no significant adverse effects are predicted as result of the Project. The Project is expected to provide the following net benefits:

- Increase in labour demand from direct employment, indirect employment, and induced employment during construction and operations of the Project;
- Contracting opportunities for Indigenous and non-Indigenous businesses and spending by local and regional consumers and service-oriented businesses through wages and income from construction and operations of the Project that will support and promote economic development; and
- Access to mineral exploration activities and proposed mining developments in the Ring of Fire area that would amplify the economic benefits noted above and by doing so result in improvements to the social and health conditions and overall well-being of Webequie First Nation and other Indigenous communities in the region.

The EA Act and IA Act do not differentiate between the importance of the different elements of the environment (being, natural, social, economic and health); however, the MECP Code of Practice acknowledges that the effects to one environment may be greater than the effects to another (MECP, 2014). In the case of the Project, there are disadvantages to the natural environment because of the construction of the Project, but the need for the Project and the social and economic benefits outweighs the advantages of not undertaking the Project.

The selection of the Project as the preferred alternative is supported by the identification of the Project as a priority project for Ontario and Webequie First Nation and also supports long-term provincial growth and multimodal transportation initiatives in the region.

The Project as the preferred alternative also supports the aspirations of Webequie First Nation as it best addresses the Project purpose and objectives (refer to Section 1), as stated by Webequie, including providing new and enhanced opportunities to improve Webequie's economic and social well-being. It is also considered the most reasonable alternative given the current and projected available resources (people and financing) and is the likeliest alternative to be within Webequie's abilities to implement.

Given the purpose of the Project to Webequie First Nation and the Project's ability to support Ontario's provincial growth, development and multimodal transportation initiatives, the relative advantages (e.g., to provide all-season road access to the Ring of Fire area) offset the relative disadvantages.

The table below summarizes the relative advantages and disadvantages of the Project compared to the "do nothing" alternative.

Alternative	Advantages	Disadvantages
Proceed with the Project	▪ Meets the stated Project purposes of Webequie First Nation to: ▫ Allow for the movement of materials, supplies and people from the Webequie First Nation's Airport to mineral exploration and proposed future mine developments in the McFaulds Lake area; ▫ Provide employment and other economic development opportunities to community members and businesses, while preserving their language and culture; and ▫ Provide experience / training opportunities for youth to help encourage pursuit of additional skills through post-secondary. ▪ Economic benefits in the form of employment, contracts, business opportunities, or procurement of goods and services. ▪ Supports economic growth in northwestern Ontario. ▪ Long-term economic and social enhancement opportunities to Webequie and other Indigenous communities. ▪ Consistent with provincial plans and government priority initiatives around regional infrastructure in the region.	▪ Potential effects on the environment including: landscape alteration; soil erosion and soil compaction; alteration and / or loss of fish habitat, vegetation, wildlife habitat including species at risk; and other effects such as, safety and security. increased dust, noise, and vehicle emissions. ▪ Potential effects on land resources, traditional activities, or other interests of Indigenous communities.
Do nothing	▪ No potential effect on the environment. ▪ No potential effects on land resources, traditional activities, or other interests of Indigenous communities.	▪ Does not meet the stated purposes and objectives of Webequie First Nation to improve socio-economic conditions, including employment, businesses and training opportunities. ▪ Loss of economic and employment opportunities and resulting potential improvements to social, human health and community well-being. ▪ No economic benefits in the form of employment, contracts, business opportunities, or procurement of goods and services. ▪ No contribution to economic growth in northwestern Ontario. ▪ No long-term economic and social enhancement opportunities to Webequie and other Indigenous communities from access to the Ring of Fire area. ▪ Not consistent with provincial plans and government priority initiatives around regional infrastructure in the region.

ES 8.21.4 Follow-up and Related Compliance Monitoring

A follow-up and monitoring program will be developed and implemented by the proponent as described in Section 22. Environmental monitoring refers to the procedures and activities that the proponent will implement as part of its environmental management systems, and specifically its Construction Environmental Management Plan and the Operation Environmental Management Plan, to manage the environmental aspects of the proposed Project. The purpose of follow-up and monitoring will be to assess the effectiveness of mitigation measures, verify predicted effects in the EAR/IS, and to document compliance with commitments and obligations identified in the assessment and in any conditions associated with positive decisions under the EA Act and IA Act and other permits, approvals and authorizations.

The follow-up and compliance monitoring program will include the participation of Indigenous monitors during the construction and operation phases of the Project to bring local knowledge to the protection of traditional and cultural sites of importance both for their historical value and because they tangibly connect past, present, and future cultural identity.

ES 8.21.5 Engagement and Consultation

Webequie First Nation has been engaging and consulting on the WSR with Indigenous communities and groups, the public, government agencies, and stakeholders since 2019.

Relationship building has been at the core of engagement and consultation efforts. Webequie First Nation will continue to work with Indigenous communities and stakeholders throughout the assessment process to resolve issues and address comments and feedback received from the review of the Draft and Final EAR/IS. This will include, where requested, further engagement and consultation to clarify information on the Project, provide additional information, and discuss potential effects of the Project and proposed mitigation measures documented in the EAR/IS.

AtkinsRéalis

AtkinsRéalis
191 The West Mall
Toronto, ON M9C 5L6
Canada
416.252.5315

atkinsrealis.com