Webequie Supply Road

Cumulative Effects Assessment Study Plan

Draft

Webequie First Nation

July 2021

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GLOSSARY OF TERMS

Valued Components

Valued Components (VC), also referred to in other contexts as Valued Ecological Components, refers to environmental features that may be affected by a project and that have been identified to be of concern by the proponent, government agencies, Indigenous people, the scientific community, or the public. The term *valued components* has been adopted to more broadly include social/cultural values. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it. For example, it may have been identified as having scientific, social, cultural, economic, historical, archaeological, or aesthetic importance[1]. In the context of the federal *Webequie Supply Road Project Tailored Impact Statement Guidelines* (WSR TISG; IAAC, February 24, 2020), VCs included in the Guidelines are, in part, based on what local communities, including municipalities, and Indigenous groups identified (to IAAC) as valuable to them in the planning phase of the impact assessment process. Similarly, the VCs identified by the Webequie Project Team are based on the results of the proponent's engagement and consultation program to date, but also reflect professional judgment based on experience with similar projects, or other projects in a similar environment. Refer also to WSR TISG Section 7.3 for considerations and methodology in selecting Valued Components.

Evaluation Criteria

In order to evaluate alternative methods for carrying out the Project and assess its effects, a preliminary set of criteria and related indicators has been established (refer to Section 2.1.1 and Appendix A of this study plan). For the purposes of the environmental assessment/impact assessment (collectively referred to as environmental assessment or EA), including the cumulative effects assessment, the identified VCs have been directly associated with an established set of Evaluation Criteria, and the terms Valued Component and Evaluation Criteria may be used interchangeably. Indicators have been identified for each criterion as a means of comparing project alternatives and measuring potential project effects. The criteria, indicators and evaluation methods will be further developed, refined and finalized during the EA process in consultation with Indigenous communities, government ministries and agencies, the public, and any other interested persons or groups. This includes consultation on how they will be used in the cumulative effects assessment.

Residual/Net Effects

Predicted residual or net effects are the effects of the Project after "considering the consequences of technically and economically feasible measures to mitigate potentially adverse project effects" (IAAC, WSR TISG) or "the effects remaining after the application of impact management measures" (MECP, Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario). For the purposes of this study plan, the term "net effects" is used. In accordance with the TISG and the MECP Code of Practice, the EAR/IS will describe any net environmental, health, social or economic effects of the Project and whether those effects would occur in the local or regional study area. The description of the net effects can be either qualitative or quantitative, but must be context sensitive (i.e., relative to the VC under consideration), and, where appropriate, will be disaggregated by sex, gender, age and other community relevant identity factors to identify disproportionate residual effects for diverse subgroups. In the context of the cumulative effects assessment, the focus will be on VCs deemed to experience or exhibit adverse net effects.

[1] Canadian Environmental Assessment Agency. 2018. Assessing Cumulative Effects under the *Canadian Environmental Assessment Act, 2012*. Interim Technical Guidance, Version 2. P. 21.

Induced Effects
In the context of cumulative effects, induced effects or changes are those that are caused, produced, created, stimulated or otherwise brought about by the Project in combination with other past, existing or reasonably foreseeable activities or projects.

1. Introduction

1.1. Project Purpose

The proposed Webequie First Nation Supply Road Project (WSR Project) is a new, approximately 107 km long all-season road from Webequie First Nation to the mineral deposit area near McFaulds Lake (also referred to as the Ring of Fire). A Location Plan for the Project is shown on **Figure 1**. The preliminary corridor for the road consists of a northwest-southeast segment running 51 km from Webequie First Nation to a 56 km segment running east before terminating near McFaulds Lake. A total of 17 km of the corridor is within Webequie First Nation Reserve lands.

The goals and objectives of the WSR Project are as follows:

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

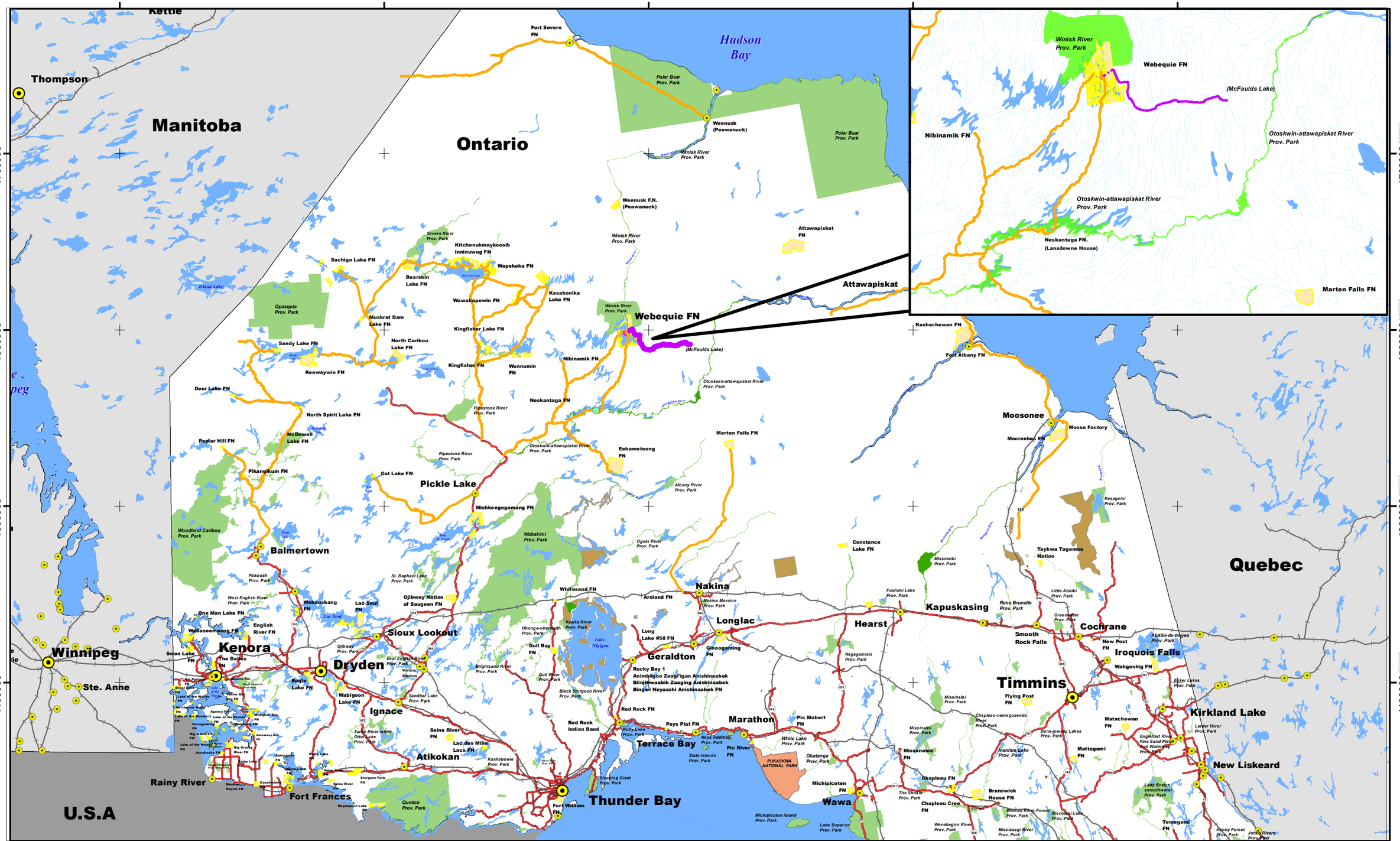
On May 3, 2018, the Ontario Minister of the Environment, Conservation and Parks (then Minister of the Environment and Climate Change) signed a voluntary agreement with Webequie First Nation to make the WSR Project subject to an Individual Environmental Assessment under Ontario's *Environmental Assessment Act*.

1.2. Regulatory Requirement

The Project must also meet the requirements of the federal *Impact Assessment Act* (IAA), including the following:

- Under Section 6(1)(g) and (m), which include the following as purposes of the Act:
  to ensure respect for the rights of the Indigenous peoples of Canada recognized and affirmed by section 35 of the Constitution Act, 1982, in the course of impact assessments and decision-making under this Act;
  to encourage the assessment of the cumulative effects of physical activities in a region and the assessment of federal policies, plans or programs and the consideration of those assessments in impact assessments;
- Under Section 22(1)(a)(ii), which identifies as one of the factors to be considered:
  any cumulative effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out.

For the purposes of this study plan, the term *environmental assessment* (or EA) is meant to include both the provincial environmental assessment and the federal impact assessment.



Legend

- Proposed Preliminary Corridor for the Webequie Supply Road
- City/Town
- Airports
- Winter Roads
- All-Season Roads
- Rail
- First Nation Reserve
- Federal National Park
- Provincial Park
- Conservation Reserve
- Waterbody

WSR WEBEQUIE SUPPLY ROAD

0 50 100 Km

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Canada Lambert Conformal Conic Projection

Webequie Supply Road

Project Location

Date: 2020/01/22	File Number: 649920	Sub Code: 0000
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1.3. Study Plan Purpose

The purpose of this document is to present the study plan developed to identify, evaluate and assess the cumulative environmental, health, social and economic effects of the WSR Project. The preparation of this Cumulative Effects Assessment Study Plan is intended to fulfil the commitment made in the Terms of Reference under the provincial EA process.

In the context of this EA, cumulative effects are the net effects from the WSR Project that overlap temporally and spatially with all past, present and reasonably foreseeable activities, "as well as within activities of the Project itself from multiple emissions and discharges (e.g., simultaneous operations) to understand synergistic or additive effects"[2].

Cumulative effects may result if:

- The WSR Project causes direct net adverse effects to a valued component (VC), following mitigation with technically and economically feasible measures; and
- The same VC may be affected by other past, present and future physical activities.

This document outlines the general approach that the Project Team will apply during the EA process to meet the expectations of the Ontario Ministry of the Environment, Conservation and Parks (MECP) with respect to the consideration of cumulative effects inherent in the ministry's *Statement of Environmental Values and Guiding Principles*. It also addresses the requirements of the *Tailored Impact Statement Guideline for the Webequie Supply Road* (February 24, 2020; WSR TISG). Cumulative effects are specifically prescribed in Section 22 of the WSR TISG. Therein is the requirement that the *Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012, Interim Technical Guidance* (March 2018, Version 2) (URL: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/assessing-cumulative-environmental-effects-ceaa2012.html) should be referenced until the Impact Assessment Agency of Canada ('the Agency") releases Technical Guidance under the IAA. The aforementioned document is referred to herein as the "Interim Cumulative Effects Assessment Guidance Document".

The Interim Cumulative Effects Assessment Guidance Document proposes a VC-centred approach to cumulative effects assessment, and provides methodological options, considerations, and documentation outcomes. It notes that each environmental assessment of project tasks should "take into account any cumulative environmental effects that are likely to result from the project in combination with the environmental effects of other physical activities that have been or will be carried out" (CEA Agency, 2018). It provides the following examples of cumulative effects:

- Destruction of habitat of the same fish population from multiple physical activities;
- Shoreline destruction from multiple physical activities;
- Damage caused to sites associated with the creation of legends, ceremonial functions, personal vison quests, etc. because of multiple physical activities;
- Effects on use of traditional fishing grounds owing to decreased fish population, which results from multiple physical activities; and
- Disturbance of an archaeologically significant site due to construction activities associated with multiple physical activities.

[2] Impact Assessment Agency of Canada. February 24, 2020. Webequie Supply Road Project Tailored Impact Statement Guidelines. P. 131.

Four key types of cumulative effects are defined:

- **Additive cumulative effects**: the sum of individual effects of two or more physical activities;
- **Synergistic cumulative effects**: the effects of two or more physical activities interacting to produce something greater or different in combination than they would when considered individually;
- **Compensatory cumulative effects**: the effects of two or more physical activities acting to partially or fully offset each other;
- **Masking cumulative effects**: the effects of one physical activity being partially or fully obscured by the effects of other physical activities .

The Interim Cumulative Effects Assessment Guidance Document cautions that its guidance does not apply to the assessment of cumulative effects of greenhouse gases (GHG) emissions, the approach to which continues to evolve. Section 15.5 of the TISG, however, does provide such guidance, including a reference to the *Draft Strategic Assessment of Climate Change,* Environment and Climate Change Canada (URL: (https://www.strategicassessmentclimatechange.ca/). It should be noted that the WSR study plan for Climate Change and Air Quality (SNC-Lavalin Inc., 2020) includes consideration of the *Draft Strategic Assessment of Climate Change*[3].

2. Study Plan Approach

The following sections describe the planned approach to data collection and the assessment of the cumulative effects assessment for the Project to meet the specific requirements in the TISG (Section 22 cumulative effects assessment, as well as Sections 8.5, 12.4, 14.3, 15.1, 15.2, 15.3. 15.4, 19.2, 25 and 26) and, where applicable, reflect the requirements of the MECP and other provincial ministries, such as MNRF (Ministry of Natural Resources and Forestry), and results of the engagement and consultation process to date.

The WSR Project Cumulative Effects Assessment Study Plan is structured according to the five-step framework outlined in the Interim Cumulative Effects Assessment Guidance Document:

1) **Scoping**, including identifying VCs for which net environmental effects are expected, determining the spatial and temporal boundaries applicable to the VCs, and identifying physical activities, including other projects, which may interact with the WSR Project net effects within the identified boundaries.

2) **Analysis** to determine how the physical activities/projects identified in the preceding (scoping) stage affect the VCs carried forward from the Scoping within the determined spatial and temporal boundaries.

3) **Mitigation** to eliminate, reduce or control adverse net effects.

4) **Determination of Significance** of any remaining adverse net effects following mitigation.

5) **Follow-up programs,** as required, to address cumulative effects, verify the accuracy of the environmental assessment and determine effectiveness of the mitigation measures.

[3] Note: The Webequie Project Team is aware of the July 2020 Final Strategic Assessment of Climate Change (Revised October 2020) document and will henceforth refer to the most current version of the document.

With respect to timing of the cumulative effects assessment, this framework is consistent with the general practice that calls for first examining the project-specific environmental effects of the project in isolation, recognizing the need to incorporate a pathways of effects approach examining the linkages between project VCs, before moving to the consideration of other projects and physical activities. This will allow the Project Team to first consider mitigation measures for the project and determine if there are net effects after the mitigation measures have been considered. Identifying such net effects is one of the ways in which a practitioner can orient and focus (scope) the assessment of cumulative effects.

Section 22 of the TSIG notes that the cumulative effects assessment will consider the cumulative effects to the rights of Indigenous peoples and cultures, for all potentially affected groups, including those located in the areas that may experience the results of increased access to the region by exploration and mineral development projects. Accordingly, input from these Indigenous groups is important to the consultation process regarding the cumulative effects assessment. The Project Team will seek input on both the proposed consultation materials and methods so that presentations on the intent of, and methods of conducting the cumulative effects assessment are made in a clear and culturally appropriate manner. The consultation program with respect to the cumulative effects assessment will be finalized in consideration of the input received from these Indigenous groups prior to implementation. Section 3.2 of this study plan describes the overarching approach to consideration of input from Indigenous peoples.

In the event that an Indigenous group elects not to participate in the process, the Project Team will share the results of the preliminary draft cumulative effects assessment with them, including the evaluation of cumulative effects with potential to affect the rights and culture of that Indigenous group. The group's feedback on this draft will be sought and incorporated in the draft EAR/IS.

2.1. Scoping

The Project Team will conduct a scoping exercise to define the scope of the cumulative effects assessment. The results will be used to bring focus to the subsequent steps in the cumulative effects assessment. The scoping is considered Step 1 and is an iterative process that will consist of the following tasks.

1) Gather information on VCs through baseline program described elsewhere in other study plans

2) Determine spatial and temporal boundaries applicable to those VCs selected

3) Identify other physical activities, including other projects which may interact with the net effects of the WSR Project VCs, within the identified boundaries

4) Identify VCs for which net adverse environmental effects are expected to remain after consideration of project-specific mitigation, which may consist of a sub-set of the VCs for the project-specific effects analysis. The identified VCs for the cumulative effect assessment will be carried forward into the analysis (Step 2).

2.1.1. Identification of Valued Components/Evaluation Criteria and Indicators for the Cumulative Effects Assessment

Evaluation and assessment criteria are related to components of the environment that are considered to have economic, social, biological, conservation, aesthetic or cultural value (Beanlands and Duinker, 1983). The criteria are directly related to valued components, and applicable specific criteria, that have physical, biological, social, cultural, economic or health importance to Indigenous groups, the public,

federal and provincial authorities and interested parties, and have the potential for change as a result of the Project. Valued components for the WSR project-specific environmental effects analysis have been identified in the federal TISG and by the Project Team and are, in part, based on what Indigenous communities and groups, the public and stakeholders identify as valuable to them in the EA process to date. Cumulative effects on the rights of Indigenous peoples will also be assessed.

Table 2-1 presents a preliminary listing of project-specific VCs, and Appendix A presents more detail on the VCs, evaluation criteria and associated indicators. The preliminary list of project-specific VCs, criteria and associated indicators will be refined, validated and finalized by the Project Team through the engagement and consultation process, including with those to whom these concerns are important and the reasons why, such as environmental, cultural, spiritual, historical, health, social, economic considerations and their relation to the exercise of Aboriginal and Treaty rights. A variety of means and consideration of factors will be used to finalize the VCs and associated criteria and indicators, including but not limited to the following:

- Engagement with Indigenous communities and groups and whether, and the extent to which, the valued component is linked to the interests or exercise of asserted or established Aboriginal and Treaty rights of Indigenous peoples;
- Stakeholder engagement, including discussions with the public, interest holders, and government authorities;
- Presence, abundance and distribution within, or relevance to, the area associated with the Project;
- Extent to which the effects (real or perceived) of the Project and related activities have the potential to interact with the VC;
- Species conservation status or concern;
- Umbrella or keystone species with potential to represent a broad range of potential effects;
- Uniqueness or rarity in the study area;
- Likelihood of an indirect effect on an associated criterion (i.e., a link or pathway exists between the affected criterion and another criterion, such as water quality affecting fish habitat);
- Ecological, social and economic value to Indigenous communities, municipalities, stakeholders, government authorities, and the public; and
- Traditional, cultural and heritage importance to Indigenous peoples.

Table 2-1: List of Preliminary Project-Specific Valued Components

Factor	Valued Components/Criteria
Atmospheric Environment	› Air Quality › Greenhouse Gas Emissions
Acoustic Environment	› Noise › Vibration
Geology, Terrain and Soils	› Geology, Terrain and Soils
Surface Water	› Surface Water
Groundwater	› Groundwater
Vegetation	› Upland Ecosystems › Riparian Ecosystems › Wetland Ecosystems › Plants of Significance › Designated Areas
Fish and Fish Habitat (including Species at Risk)	› Criteria fish species
Wildlife (including Species at Risk)	› Forest Birds

Factor	Valued Components/Criteria
	› Raptors › Shorebirds › Waterfowl › Bog/Fen Birds › Bats › Fur Bearers › Ungulates › Amphibians › Pollinating Insects › Caribou › Designated Significant Wildlife Habitat
Indigenous Peoples' Land Use and Interests	› Indigenous Current and Historical Use of Lands and Resources for Traditional Purposes › Indigenous Relationships to Traditional Lands and Resources › Cultural Continuity
Social	› Population › Income › Education › Housing and Temporary Accommodation › Social Services › Transportation and Related Infrastructure and Services › Other Infrastructure Services › Social Cohesion and Culture › Safety
Economic	› Regional and Local Economy (Commercial Activities) › Labour Force and Employment › Government Finances
Land and Resource Use	› Land Use Compatibility › Mineral and Aggregate Resources › Forestry Industry or Local Timber Harvesting › Recreation and Tourism Activities › Provincial Parks, Areas of Natural and Scientific Interest or Conservation Reserves
Human Health	› Physical Health › Mental Health › Health Behaviours: Substance Abuse › Health Behaviours: Exercise › Health Behaviours: Recreational Activity › Health Care Access and Quality › Dental Care Access › Diet & Country Foods › Physical Environmental Factors Influencing Health

Factor	Valued Components/Criteria
Visual Aesthetics	› Visual Character and Sensitivity
Archaeology and Cultural Heritage	› Archaeological Sites and Resource › Built Heritage Resources and Cultural Heritage Landscapes
Technical Considerations	› Safety and Reliability › Constructability › Cost › Location of Supportive Infrastructure

The Project Team will conduct the cumulative effects assessment based on the finalized project-specific VCs and evaluation criteria. The predicted project-specific net effects on each VC after mitigation, or lack thereof, will be considered in determining which of the VCs will be carried forward into the cumulative effects analysis. The VCs for which net adverse effects are predicted will be selected as the VCs for the cumulative effects assessment (referred to herein for clarity as the CE VCs). Available information will be reviewed to make this determination, including input from Indigenous communities. Accordingly, the CE VCs and associated criteria will be a subset of the project-specific VCs and associated criteria; that is, those VCs for which adverse net effects are anticipated following project mitigation.

The Project Team will provide a rationale as to why each CE VC is, or is not, carried forward in the cumulative effects assessment, including the potential net environmental effects (or absence of net effects) from the WSR Project.

The list of VCs to be included in the cumulative effects assessment will be subject to updating by the Project Team in the event new information becomes available, indicating the possibility of project-specific net cumulative effects not initially expected.

2.1.2. Determining Boundaries for Cumulative Effects

2.1.2.1. Spatial Boundaries

Spatial boundaries define the geographic extent within which the potential environmental effects of the Project are considered. For the project-specific VCs (subject of other work plans), spatial boundaries are being defined to reflect three increasingly scaled study areas for the impact assessment. The spatial boundaries for the project-specific VCs vary, depending on the associated VC, but can be generally described as follows and shown in **Figure 2**:

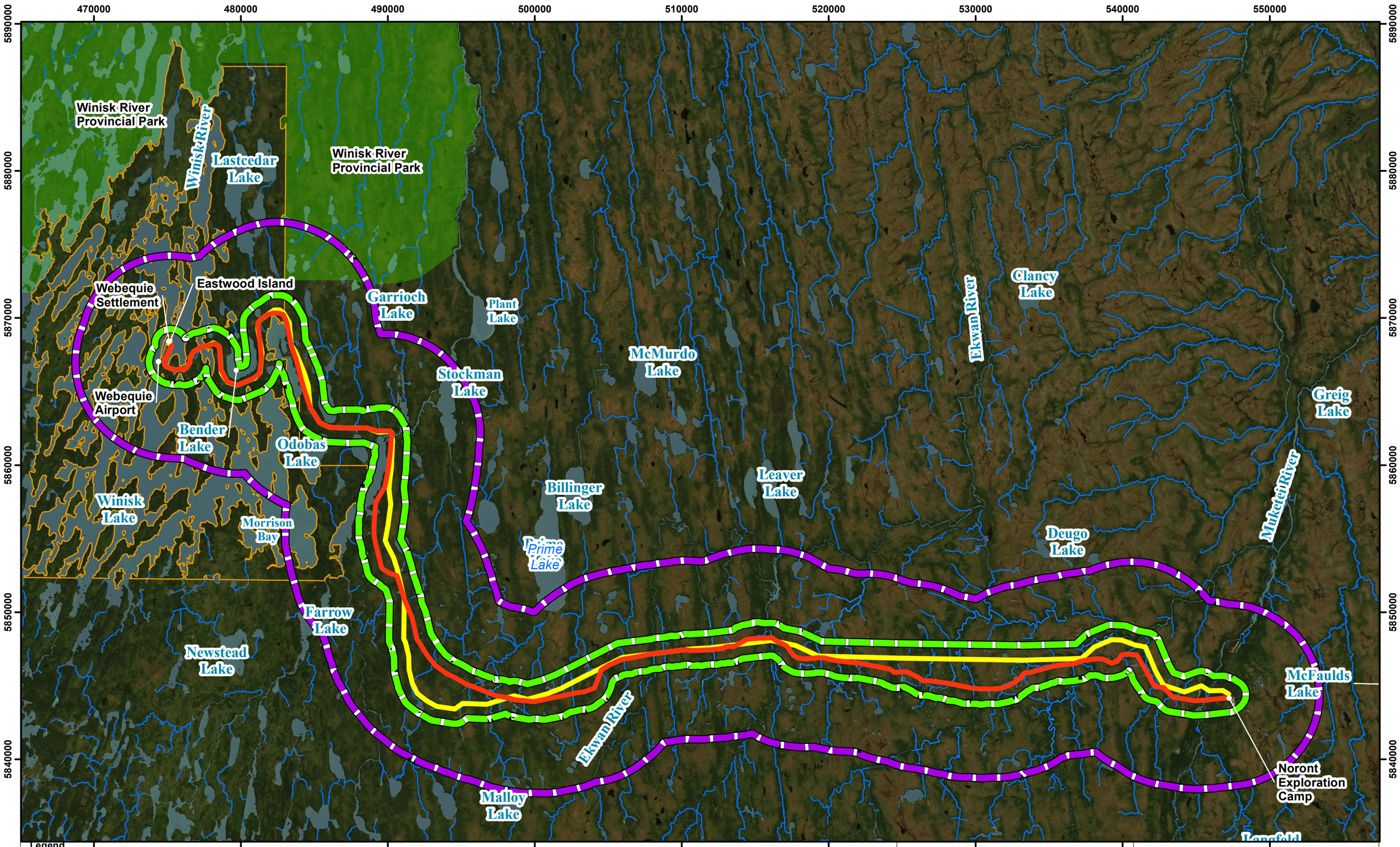
- **Project Footprint (PF),** including the 35 m right-of-way (ROW) width for the WSR as well as temporary or permanent areas needed to support the Project (supportive infrastructure), including laydown/storage yards, construction camps, access roads and aggregate extraction sites.

- **Local Study Area (LSA),** which extends approximately 1 km from the PF of the supply road, and 500 metres (m) from the temporary or permanent supportive infrastructure.

- **Regional Study Area (RSA),** which extends at a minimum 5 km from the LSA boundary.

The above study areas are used to characterize existing environmental conditions and predict the direct and indirect changes from the Project on the identified VCs on a continuum of increasing spatial scales

from the PF to broader, regional levels. The physical and biological properties of the VCs and related evaluation criteria are also considered in defining them.



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The Project Team will define the **CE Study Area** (subject of this study plan) for each CE VC. Given the many potential contributing factors (e.g., a species potentially affected by a number of linear developments and the importance of that species to Indigenous people), cumulative effects often occur at a larger spatial scale than project-specific effects. Accordingly, the CE Study Area will represent the largest spatial boundary. It will include the aforementioned study areas and extend beyond the RSA to capture cumulative effects from physical activities that may interact with the net effects of the WSR Project.

The Project Team will provide the rationale for the CE Study Area boundaries defined for each CE VC, including considerations of the geographic extent of the net environmental effects from the WSR Project on the particular VC under consideration; and the effects of past, existing and future physical activities on that VC.

In delineating the CE Study Area for a VC, the Project Team will take into consideration the following aspects:

- Availability and quality of relevant data, including spatial data.
- Geographic ranges. For example, for caribou, as per Section 7.4.1 of the WSR Project TISG, the spatial boundaries will be delineated to encompass the implicated Ontario caribou ranges (Missisa and Ozhiski), and the federal Far North caribou range.
- Zone of influence (ZOI), beyond which net effects are no longer detectable. The ZOI for impacts on traditional lands used for caribou hunting will not necessarily coincide with the broader geographic ranges being considered for the cumulative effects on caribou as a VC.
- Natural ecological boundaries, such as the broad Ecological Land Classifications, watersheds and natural boundaries (e.g., large watercourses) to movement for less mobile types of wildlife.
- The spatial boundary does not necessarily have to include the physical activities scoped into the CEA (i.e., physical activities will generally not be the primary factor in establishing spatial boundaries for the cumulative effects assessment).

The determination of the spatial boundaries may be iterative; for example, based on information obtained from Indigenous groups or other means of data collection.

2.1.2.2. Temporal Boundaries

Historical Context

The TISG (Section 22) states that effects of past activities are to be used to contextualize the current state of the valued component (p.133). Historical events and activities are particularly important to understanding current social, economic, cultural, health, and environmental vulnerabilities, as well as the resilience of Indigenous peoples, in relation to experiences and legacies of colonialism. Engaging with potentially affected Indigenous communities, the Project Team will work to contextualize their historical experiences of colonialism and environmental change through building an understanding and overview of events, activities, and policies that have severely impacted and disrupted Indigenous communities and their way of life in the region. This will also include a review of sources (e.g., community land use plans, as well as sources documenting a broader overview of impacts in the region) providing documentation of historical post-contact events and changes that have affected the current well-being of Indigenous communities and groups, including (but not limited to):

- The Fur Trade;
- European settlement;
- Introduction and spread of disease;
- Treaty 9;
- Reserve creation; and
- Residential School System.

All of these events (and others) have led to significant changes to Indigenous peoples' health, social and economic systems, cultural practices, and their occupation of, relationship to, and use of traditional lands and territories. It is important to understand and present how this historical and structural context has shaped the vulnerability or resilience of valued components being identified for the cumulative effects assessment.

The Project Team will seek focused input from key informants, such as Indigenous Elders in communities, to create this narrative. The results of this engagement will then be shared with the wider community (with permission), and will be presented in the EAR/IS in narrative format (with permission). Information will also be obtained through Indigenous Knowledge and Land Use studies (where available and with permission). It should be recognized that due to the sensitivity and traumatic experiences associated with of some of these topics, such as residential schools, it may not be advisable to try and elicit this information from community members. In such cases, secondary sources will be relied upon more heavily, including the Truth and Reconciliation Reports.

Project Implementation Phases

For the Project-specific effects analysis, Project implementation will occur in phases (refer to **Section 4.3.4 of the ToR**), with potential interactions with the natural, cultural, health, and socio-economic environments and the potential occurrence of net impacts generally anticipated to be different in each Project phase. In order to focus the CEA, the key activities can typically be divided into the two main phases:

- **Construction Phase**: All the activities associated with the initial development of the road and supportive infrastructure; and
- **Operations Phase**: All activities associated with operation and maintenance of the road and any other permanent supportive infrastructure (e.g., operations and maintenance yard, aggregate pits) that will start after construction and continue indefinitely.

The Project will be operated for an indeterminate time period; therefore, retirement (decommissioning/abandonment/closure) is not anticipated and will not be addressed in the EA. For the cumulative effects assessment, the Project Team will adopt a VC-centric approach to determine the CE temporal boundaries for each of the selected CE VCs. The temporal boundaries identified for the project-specific VCs will be examined to determine if these require adjustment or refinement to serve as the CE temporal boundaries (subject of this work plan), including in consideration of the other physical activities that may interact with the project's net effects. As the decommissioning of the road is not envisaged, a two-phase life cycle (Construction Phase and Operations Phase) will also be adopted for the CE temporal boundaries. However, the CE temporal boundaries may be extended back to encompass historical physical activities prior to the implementation of the Project to provide a better understanding of the cumulative effects, including contextual.

The Project Team will take into account the following considerations, as applicable, in determining the CE temporal boundaries for each of the CE VCs:

- Natural variations in the VCs over time;
- Long term impacts from historical physical activities;
- Changes in the ecosystem or species, as determined from the literature or input from agencies, Indigenous communities and the public;
- Changes in land use over time, including traditional land use;
- The potential overlap between the project's net effects and the identified physical activities; and
- Potential lag times and the effects of chronic exposure over time.

2.1.3. Identifying Physical Activities for the Cumulative Effects Assessment

The physical activities to be considered in the cumulative effects assessment are those that have been or likely will be carried out, and that could cause effects, including induced effects, to the selected VCs within their respective spatial and temporal boundaries. Furthermore, these effects would act in combination with the net effects from the WSR Project to create cumulative effects. Section 22 of the TISG identifies the following projects or activities that are to be considered, at a minimum, in the cumulative effects assessment:

- Historical and existing mineral developments, Goldcorp's Musselwhite Mine, DeBeers' Victor Mine and Greenstone Gold's Hardrock Mine;
- Other historical infrastructure projects;
- Marten Falls Community Access Road Project and other all-season road projects;
- Power transmission projects;
- Construction of upgrades to the Anaconda and Painter Lake Forestry Access Roads;
- The construction and operation of the Northern Road Link (future road that may link the northern portion of the Marten Falls Community Access Road to the Ring of Fire area);
- Transportation of ore from future development near the project for processing, once past the Webequie Supply Road;
- East-West road;
- Forest management units;
- Mining activities, including those associated with Eagle's Nest, Black Thor, Black Bird, Big Daddy and Black Label;
- Increased winter road traffic during Operations and Maintenance by future mining proponents;
- Mineral exploration activity in the area; and
- Past projects, including the Ogoki and Long Lac diversions.

The Project Team will refine the above list on the basis of background data and information collection, as well through engagement and consultation with Indigenous communities and groups, government agencies and ministries, members of the public and other interested parties who may provide information about these physical activities, or may identify other physical activities pertinent to the cumulative effects assessment for the WSR Project.

The background data and information collection for the cumulative effects assessment will include project-specific reports, such as:

- All Season Community Road Study – Final report, (Webequie First Nation/Nibinamik First Nation/Neskantaga First Nation/Eabametoong First Nation, June 2016);

- McFaulds Lake Project - Airphoto Mapping for Route Location and Terrain Assessment Scoping/Prefeasibility-Level Study Alternative Road Route Locations (J.D. Mollard and Associates, February 2010);
- McFaulds Lake Project - Report On Mineral and Organic Terrain Mapping in a 10 km Radius Around Esker Camp (J.D. Mollard and Associates, September 2010);
- McFaulds Lake Project - High Level Terrain Mapping McFaulds Lake Winter Road Route (J.D. Mollard and Associates, February 2011);
- Eagle's Nest Project - Federal/Provincial Environmental Impact Statement/Environmental Assessment Report - Draft Copy (Noront, December 2013);
- TPA1B Webequie Community Supply Road Project Description – Draft (Webequie First Nation, January 2018);
- Other relevant project description, environmental assessment and baseline documents available for the identified physical activities.

The Project Team will also incorporate input from Indigenous communities and groups, government agencies and the public in the analysis. Finally, depending on the CE VC under consideration, a reasonable level of effort will be used to collect and review other secondary sources, such as:

- Scientific and science-based literature;
- Social science literature;
- Historical documentation;
- Legislation;
- Available mapping;
- Selected Provincial GIS Datasets - wetland, watercourse, waterbody, Far North Land Classification, Provincial Satellite Derived Disturbance Mapping, Land Information Ontario;
- Ontario Species at Risk, May 2000, Committee on the Status of Species at Risk in Ontario (COSSARO);
- Committee on the Status of Endangered Wildlife in Canada (COSEWIC) reports;
- Government websites (e.g., for land use plans, development strategies, or open data);
- Any regional assessment studies conducted under CEAA 2012 or conducted by others that are available or may come available;
- Monitoring information, status assessments, or management plans from resource management agencies;
- Resource management plans;
- Land Use Planning documents.

The Project Team will examine and describe each of the selected physical activities in sufficient detail to enable the potential environmental effects arising from that physical activity to be characterized. For each physical activity, the following information will be compiled to the extent possible:

- Project title or, otherwise, Type of Activity and purpose;
- Proponent, owner, operator;
- Historical phase(s), current phase and future phase(s), including expected duration of each of phase of the life cycle;
- Location(s) and areal size(s);
- Components and configuration;
- Processes used and capacity (throughput);
- Seasonal considerations;
- Frequency of use, if intermittent;

- Transportation and power supply, including route and mode;
- Impacts, emissions, discharges, and wastes, particularly those occurring at a larger scale (e.g., regional);
- Known mitigations, including effectiveness;
- Concerns regarding the physical activity, as reported through the media or identified during the WSR Project Engagement and Consultation Program;
- Approvals received or applications having been submitted, with greater certainty for a project to proceed if approvals have been obtained;
- Employment generated or to be generated by the project/physical activity; and
- Current or planned monitoring or follow-up program.

Not all of the above types of information apply to all of the projects or activities. Furthermore, it is expected that there will be data gaps, with greater data gaps for historical projects and some data having not been generated, or not being publicly available. For projects or activities that are yet to developed, data surrogates will be used, as appropriate, for important data gaps.

The current conditions of the selected VCs will be characterized and assessed as to whether they may be representative of effects from past and existing physical activities. If so, their current conditions will be described in the context of past and existing physical activities, including whether the condition of the VC is likely stabilized, or is in a state of change in response to those physical activities.

For a physical activity and its environmental effects to be considered in the cumulative effects assessment, the environmental effects of that physical activity on the selected VC must occur within the spatial and temporal boundaries set for the cumulative effects assessment. It will be noted and considered in the analysis if there are plans to stop operating or decommission any of the identified physical activities.

2.1.4. Documentation

The Project Team will document the results of the scoping element (Step 1), including:

- List of VCs to be included or excluded from the cumulative effects assessment analysis, including the rationale for including or excluding those VCs;
- Spatial and temporal boundaries for each of the CE VCs, including methodology and rationale for the selected boundaries; and
- List of and characterization of projects and activities to be used in the cumulative effects assessment, including assumptions, use of data surrogates, data limitations

2.2. Analysis

The assessment of cumulative effects (Step 2) will be a multi-disciplinary exercise entailing three primary sub-steps, which are described in more detail in the following sections:

- Compilation of the project-specific net effects as identified and characterized from the net effects assessments conducted for each of the valued components;

- Characterization of cumulative effects for the selected VCs without the WSR Project, by identifying the cumulative effects of the multiple physical activities on the CE valued components

within their respective CE spatial and temporal boundaries, including linkages of processes and environmental effects across disciplinary boundaries (cumulative effects without the WSR Project);

- Examination of the cumulative effects of the WSR Project in combination with the aforementioned present and reasonably foreseeable projects and activities on the VC within the CE spatial and temporal boundaries, including potentially new linkages of processes and environmental effects across disciplinary boundaries (cumulative effects with the WSR Project).

2.2.1. Compilation and Characterization of Net Effects

Once identified, the Project Team will characterize the net effects as the foundation for determining the significance of incremental and cumulative effects of the Project. Specifically, the net effects can be characterized as follows:

- **Direction** – The direction of change in effect relative to the current value, state or condition, described in terms of Positive, Neutral, or Negative.
- **Magnitude** - The degree of change in measurable parameters or the VC relative to existing (baseline) conditions. Magnitude would be described as negligible, low, moderate or high as defined by VC.
- **Geographic Extent** - The spatial extent of which an effect is expected to occur/can be detected and described in terms of the PF, LSA and RSA.
- **Severity** - The level of damage to the valued component from the effect that can reasonably be expected; typically measured as the degree of destruction or degradation within the spatial area of the PF, LSA and RSA. Severity would be characterized as: Extreme; Serious, Moderate or Slight.
- **Duration** - Duration is the period of time required until the measurable parameter or the VC returns to its existing (baseline) condition, or the residual effect can no longer be measured or otherwise perceived. Duration would be characterized as short term, medium term, long term and permanent.
- **Reversibility** - Reversibility describes whether a measurable parameter or the VC can return to its existing condition after the project activity ceases. Reversibility would be characterized as Reversible – the residual effect is likely to be reversed after activity completion and rehabilitation or Irreversible – the residual effect is unlikely to be reversed.
- **Frequency** – Is how often an effect occurs over the duration of the Project, including any specific phase. Frequency would be characterized as: Infrequent; Frequent or Continuous.
- **Probability or Likelihood of Occurrence** – Is a measure of the probability or likelihood an activity will result in an environmental effect. Probability or likelihood of occurrence would be characterized as: Unlikely, Possible; Probable and Certain.

After identifying and characterizing the net effects for each of the VCs, they will be compiled and carried forward by the Project Team for integration in the cumulative effects assessment as an inter-disciplinary exercise.

It is recognized that Indigenous communities may elect to develop their own cumulative effects characterizations, and they will be given the opportunity to do so, either in collaboration with the Webequie Project Team, within a First Nation-led assessment conducted by community members or using a third-party consultant.

2.2.2. Cumulative Effects of Identified Physical Activities Without WSR Project

A valued component may already be under stress from multiple stressors from a single physical activity, or from a single type of stressor arising from a number of physical activities, or from multiple types of stressors arising from a number of physical activities.

For the cumulative effects assessment, the condition of a VC will be determined firstly under a future scenario where the WSR Project does not proceed (i.e., cumulative effects without the WSR Project). In this scenario, other physical activities could either continue to, or would, in the future, impact the condition of the VC. However, some of the physical activities identified in the Step 1 (Scoping) would, or may, not proceed, or otherwise would be changed under a future scenario where the WSR Project did not proceed. For example:

- Future projected use of Marten Falls Community Access Road would be less than predicted;
- Northern Road Link could not proceed as currently envisaged;
- Transportation of ore from future development for processing would not occur near the community of Webequie, as that is not the stated intent of the WSR or of interest to WFN;
- The East-West road connection from the McFaulds Lake area to the provincial highway system may not proceed;
- Traffic in winter road network could increase based on future mineral exploration and development; and
-
- Mineral exploration and mining activity in the area would change.

Accordingly, the list of physical activities will need to be adjusted/reduced from the full list of the physical activities identified during the Scoping to enable an analysis of a future scenario without the WSR Project. Information on the effects of the remaining physical activities collected during Scoping will be considered in the cumulative effects assessment without the WSR Project.

During the project-specific effects assessments (subject of other study plans), the existing condition of a VC is characterized through a variety of means, including information-gathering, surveys, baseline studies, and engagement and consultation with Indigenous communities, government agencies and ministries, the public and special interest groups. The baseline condition of the VC, as characterized through this process, will be considered to generally reflect how the VC has been affected by historical and current physical activities, at least in the context of the RSA.

For the cumulative effects assessment of the no-project scenario, the baseline condition of the VC, as determined through the project-specific effects assessment, will be adopted as a point of reference. The characterization of the VC will be:

- Expanded spatially to encompass the larger CE Study Area determined during Scoping; and
- Extended temporally, as required, to include the temporal boundaries as determined during Scoping, including past and reasonably foreseeable future physical activities.

The cumulative effects resulting from the physical activities interacting with the VC within the larger CE spatial boundaries and temporal boundaries will be examined, to the extent possible. The methodology to determine the cumulative effects will be selected considering the type, reliability, completeness and

limitations to the available data and information sources regarding the physical activities and their predicted impact on the VC. For some physical activities that have recently been implemented, or that are in the planning/approval phase, comprehensive data may be available. It is expected that there are fewer data and less information available for historical physical activities, though oral histories of Indigenous peoples may be relied upon more heavily in relation to understanding changes to particular VCs that could be associated with historical physical activities.

Depending on the available data and information, an appropriate methodology will be selected for characterizing the cumulative effects solely from the physical activities without implementation of the WSR Project. The Interim Cumulative Effects Assessment Guidance Document identifies the following methodologies which may be appropriate for determining cumulative effects:

- Source-pathway-receptor models, with the VC being the receptor;
- Comparison to reference cases or areas with comparable conditions. Reference cases related to Indigenous peoples however need to recognize and take into consideration the uniqueness of each group;
- Comparison using (qualitative or quantitative) models to supplement available data or simulate existing and future conditions or otherwise to model the response of VC to cumulative effects;
- Qualitative, including descriptive narratives, graphic representations or conceptual relationships;
- Information from the Indigenous groups, including Indigenous Knowledge.

The Project Team will first determine the cumulative effects for those VCs that they assessed in the project-specific effects assessment and for which net effects had been predicted, taking into account the physical activities and the CE study area and temporal boundaries applicable to that VC.

Next, the Project Team will conduct a multi-disciplinary exercise to examine the interactions amongst the valued components and the physical activities, including:

- Identifying effects across disciplinary boundaries;
- Characterizing the cumulative effects as additive, synergistic, compensatory or masking (as defined in **Section 1.3**); and
- Identifying VCs subject to multiple stressors and, therefore, possibly representing greater concern.

This analysis is intended to provide an understanding of a future scenario without implementation of the WSR Project and the expected conditions of the VCs. As per the TISG requirements, this assessment will also specifically assess the cumulative effects to rights of Indigenous peoples and their cultures. In addition, though related, the assessment will assess effects to Ontario's largest caribou range (Missisa).

2.2.3. Cumulative Effects of WSR Project and Identified Physical Activities

This analysis will be carried out as described above, with the exception that the net effects of the WSR Project will be included in the analysis under a future scenario where the Project does proceed. In this case, the environmental effects from the full list of physical activities identified in the Scoping step would be considered as proceeding. Information on the effects of the physical activities collected during Scoping will be considered in the cumulative effects assessment with the WSR Project.

2.2.4. Comparative Analysis of Cumulative Effects With and Without the WSR Project

Finally, the two future scenarios (with and without the WSR Project) will be compared to determine the cumulative effects attributed to the WSR Project, including physical activities induced by the Project. Cumulative effects may impact communities, Indigenous groups and stakeholders in different ways, including through a gender-based lens (refer to **Section 2.4**) and they may respond differently to them.

2.2.5. Documentation

The data sources, including limitations, and the methodology(ies) selected for determining the cumulative effects without and with WSR Project in place will be identified, as well as the rationale for the selected methodology(ies), cumulative effects on VCs in combination with environmental effects of other physical activities and the contribution of the WSR Project to cumulative effects.

2.3. Mitigation

Once the potential cumulative effects are identified, technically and economically feasible impact management measures (or "mitigation measures") to avoid and minimize potential adverse cumulative effects will be identified for each phase of the Project. Design considerations and impact management measures will be identified to offset or eliminate potential adverse cumulative and will be described in the EAR/IS. For cumulative effects, it is recognized that some of the most effective mitigation may be beyond the scope of WSR Project. Regardless, these impact management measures will be identified, including as applicable the party(ies) best suited to implement these measures.

Impact management measures will be developed based on:

- A review of the commitments to mitigation by others associated with the identified physical activities and their apparent effectiveness;
- Knowledge and experience of the Project Team with linear infrastructure developments as well as the other types of physical activities listed in Scoping;
- Industry best management practices and applicable agency requirements and guidance; and
- Measures identified by Indigenous communities, the public and stakeholders through feedback received as part of the engagement and consultation program.

It is understood that impact management measures are not always fully effective; therefore, WFN will identify a compliance monitoring and effects monitoring program as part of the EA for implementation during the Project phases for those impact management measures within the scope of the Project.

2.4. Gender Based Analysis Plus (GBA+)

Information and data will be collected and disaggregated by diverse subgroups (women, youth, Elders, etc.), as part of applying a Gender Based Analysis Plus (GBA+) lens. For the Cumulative Effects Assessment, the baseline information will focus on criteria having cultural, health, social, or economic value to Indigenous groups, and with the potential to be affected through reasonably foreseeable future projects, such as large-scale mining developments. This may include cumulative impacts on vulnerable sub-groups such as Indigenous women, youth, and Elders including the possibility of increased crime,

violence against women, drug use, and racism. There is also the potential for cumulative impacts on traditional land use and food security, which may be tied to roles typically assumed by vulnerable community subgroups. To address these potential impacts, the Project Team will conduct socio-economic and health surveys; focus groups with women, youths, and Elders; and key informant interviews and activity mapping with community members who hunt/trap/fish, as well as desktop research.

The Project Team will work with Indigenous communities to identify the appropriate participants for each of the subgroups that are willing to contribute to the baseline data collection through surveys, focus groups, and key informant interviews. The Project Team will tailor how they engage with these groups based on community protocols, comfort levels, and the Covid-19 restrictions in place.

2.5. Determination of Significance

The assessment of significance of cumulative effects from the Project and other previous, existing, and reasonably foreseeable developments will generally follow the guidelines and principles of the Draft *Technical Guidance Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects Under the Canadian Environmental Assessment Act* (CEA Agency, 2017) and the Operational Policy Statement: Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under the Canadian Environmental Assessment Act, 2012 (CEA Agency, 2015).

The Project Team will describe and quantify predicted cumulative effects attributable to the Project, taking into consideration the identified mitigation, where appropriate. Finally, the significance of the predicted cumulative effect will be classified as either “significant” or “not significant”, using the same definitions established for the Project for the respective VC for “significant” and “not significant”. These definitions will be developed based on the results of engagement and consultation activities conducted during the EA phase.

Given that significance determinations are an interpretive exercise imbued with human values and cultural meaning (see Noble 2015; Baker and Rapaport 2005), it is recognized that communities may wish to provide their own significance determinations, and they will have the opportunity to do so, working either collaboratively with the Project Team, within a First Nation-led assessment conducted by community members, or through a third-party consultant.

2.6. Follow-up

Webequie First Nation will develop a monitoring framework during the EA process for each Project phase (construction and operation and maintenance). The two primary types of monitoring to be developed will include:

- Compliance monitoring; and
- Effects monitoring, including for cumulative effects attributable to the Project.

The compliance monitoring will assess and evaluate whether the Project has been constructed, implemented and/or operated in accordance with commitments made during the EA process, and any conditions of the federal IA and provincial EA approvals and other approvals required to implement the Project.

The effects monitoring will be designed to verify the prediction of the effects assessment, including for cumulative effects, and to verify the effectiveness of the impact management measures, including mitigation measures implemented by the Project for cumulative effects. This would include construction and operational monitoring that would identify actual effects, assess the effectiveness of the measures to minimize or eliminate adverse effects, and evaluate the need for any additional action to ensure that environmental commitments and obligations are fulfilled and mitigation measures are effective.

3. Consideration of Input from the Public and Indigenous Peoples

3.1. Public Participation

EA study participants as identified in the Agency *Public Participation Plan* dated February 24, 2020 for the WSR Project will be engaged and consulted. The Public Participation Plan was developed by the Agency to set out proposed opportunities for participation during the impact assessment process for Agency-led activities. The proponent, or its subject matter experts, may participate in activities as requested by the Agency.

The ToR provides a plan for engaging and consulting government ministries and agencies, the public and stakeholders based on EA study milestones similar to those for Indigenous communities.

All identified affected and/or interested stakeholders and members of the public will be notified at the EA study milestones. The public and stakeholders will have the opportunity to attend two (2) open house sessions that will be held in the City of Thunder Bay, focussing on:

1. Project and EA process overview; baseline data collection; spatial and temporal boundaries for assessment; criteria and indicators; and identification and preliminary evaluation of alternatives; and

2. Presentation of the selected preferred alternatives/the Project, including potential effects, mitigation, net effects and their significance and follow-up monitoring.

The open houses will include display materials and handouts containing information on the Project, the EA study process, known existing environmental conditions, the results of studies that have been conducted to date; the development and evaluation of alternatives, including the rationale for use of criteria and indicators; the project schedule; and the results of the consultation program. The Webequie Project Team will be available to receive and respond to questions and have an open dialogue regarding the EA process. Written comments may be prepared and left at the open house venue or sent to the Project Team within a specified period following the event.

The public and stakeholders will be notified regarding the commencement of the EA and submission of the Draft and Final EAR/IS. The EAR/IS will be available for review on the Project Website, and at municipal offices or nearby public libraries in:

- City of Thunder Bay

- Municipality of Greenstone
- Township of Pickle Lake
- City of Timmins
- Municipality of Sioux Lookout

In summary, the methods and activities for engagement and consultation with the public will include:

- Notification letters;
- Public notices and newspaper advertising at key EA milestones – Notice of Commencement; Notice of Open Houses; Notices for Draft and Final EAR/IS;
- Open houses;
- Communication materials for use at meetings such as slide decks, project fact sheets, handouts, etc.;
- Project Website; and
- Opportunities to review and provide comments on the Draft and Final EAR/IS.

All comments received from the public engagement and consultation activities will be tracked (i.e., Record of Consultation) and considered by the Project Team with the objective that the public be provided meaningful opportunities to participate, including in meaningful discussions in the EA process.

3.2. Indigenous Engagement and Consultation

3.2.1. Communities to be Included in the Assessment

The assessment will include the 22 identified Indigenous communities and groups that are to be consulted as part of the EA process, as shown in **Table 3.1** below. These communities have been identified by the MECP and Agency as communities whose established or asserted Aboriginal and/or Treaty rights may be adversely affected by the Project and/or may have interests in the project. Communities marked with an asterisk are those whose Aboriginal and Treaty rights may be affected by the Project.

The table also includes those communities that have been identified by Webequie First Nation based on Elders' guiding principles and Webequie's Three-Tier approach to Indigenous consultation and engagement. WFN identified communities and assessed them based on the following criteria:

- Geographically closer to the project area than others;
- Known to have traditionally used some of the potentially affected lands in the past, or currently;
- Downstream of the Project and may experience impacts as a result of effects to waterways;
- Considered to have closer familial/clan connections to the members of WFN; and/or
- Have been involved in all-season road planning in the Region, either directly with the WFN, or in consideration of all-season road planning that the WFN has been involved with in recent years.

Based on these factors, the communities identified by WFN will be offered the deepest or intensive consultation/engagement. This includes 3 community visits with the WFN identified communities and 2 visits with the remaining communities and groups. Additional community and/or group visits will also be arranged upon request, particularly if there are issues/topics of specific interest or concern that require further discussion.

Table 3-1:Indigenous Communities to be Consulted

Indigenous Community	Identified by FN	Identified by MECP	Identified by IAAC
Webequie First Nation	✓	✓*	✓*
Aroland First Nation		✓*	✓*
Attawapiskat First Nation	✓	✓*	✓*
Constance Lake First Nation		✓*	✓
Eabametoong First Nation	✓	✓	✓*
Fort Albany First Nation		✓*	✓*
Ginoogaming First Nation		✓	✓
Kasabonika First Nation	✓	✓*	✓*
Kaschechewan First Nation		✓*	✓
Kitchenuhmaykoosib Inninuwug		✓*	✓
Kingfisher Lake First Nation		✓*	
Long Lake #58 First Nation		✓	✓
Marten Falls First Nation	✓	✓*	✓*
Mishkeegogamang First Nation		✓	
Neskantaga First Nation	✓	✓*	✓*
Nibinamik First Nation	✓	✓*	✓*
North Caribou Lake First Nation		✓	
Wapekeka First Nation		✓*	
Wawakapewin First Nation		✓*	
Weenusk (Peawanuck) First Nation	✓	✓*	✓*
Wunnumin Lake First Nation		✓*	
Métis Nation of Ontario – Region 2		✓	

3.2.2. Approach and Methods

The Project Team will consult and engage with Indigenous communities throughout the assessment process, including predicted cumulative effects on valued components having have Indigenous cultural, social or economic importance. It is also the Project Team's objective that the EA captures Indigenous Knowledge and any issues, concerns or other information being provided by Indigenous communities accurately and appropriately. As such, Indigenous communities will have the opportunity to provide input and feedback during the following steps of the EA and more specifically the assessment of the cumulative effects as outlined in this work plan:

- Provide input into the cumulative effects assessment methodology;
- Provide input to the cumulative effects assessment Scoping, including Valued Components, spatial boundaries (study areas) and temporal boundaries for the cumulative effects assessment, and identification of physical activities to be considered in the cumulative effects assessment;
- Provide input on methods types of baseline data and information to be collected, including opportunity to provide Indigenous Knowledge into the cumulative effects assessment;
- Discuss potential cumulative effects based on predicted net effects from the WSR Project interacting in time and space with the effects from the identified physical activities;
- Provide input to identify mitigation measures and any follow-up monitoring programs during the construction and/or operation phases of the Project, including predicted overall net cumulative

effects and significance, including those that may interfere with the exercise of rights of Indigenous peoples.

A variety of activities and materials will be used to provide information and receive input from Indigenous communities during the EA process. These are outlined and detailed in the provincial ToR which includes the mechanisms, activities and events that are planned for various stages throughout the EA process and will be used at milestone points to ensure optimal engagement with Indigenous communities. In summary this includes the following:

- Notification letters sent by registered mail to all of the identified Indigenous communities and groups (i.e., Tribal Councils) informing them at key milestones (e.g., Commencement of provincial EA; Submission Draft EAR/IS and Submission of Final EAR/IS);
- Community visits throughout for those communities identified by IACC and MECP whose established or asserted Aboriginal and/or treaty rights may be adversely affected by the Project;
- Meetings (2) with off-reserve community members of the 22 Indigenous communities to be consulted as part of the EA;
- Information meetings with Métis Nation of Ontario;
- Engagement with Tribal Councils and Nishnawbe Aski Nation, with meetings held upon request;
- Communication materials for use at meetings, such as slide decks, project fact sheets, handouts, etc., including, where requested, translation to native language;
- Audio and visual products for those Indigenous communities that have the capability; community meetings and presentations will be live-streamed through local community media to allow for a wider audience to participate in the meetings;
- Use of surveys or focused community-based meetings to obtain information (e.g., socio-economic, human health, etc.) and identify concerns from Indigenous people;
- Project Website (www.supplyroad.ca) for the public to review project related information and documents, including informative video tutorials (e.g., EA studies); and
- Project Newsletter letters.

Engagement with Indigenous groups has been undertaken as part of the ToR phase and included components of the study plan (e.g., baseline studies for valued components, spatial and temporal boundaries, criteria and indicators, EA alternatives, etc.) and will continue as part of the planned EA engagement activities for the Project.

All outreach efforts and consultation activities will be recorded as part of the Record of Consultation to allow for validation by the Agency and the MECP. The EAR/IS will describe how input from Indigenous communities and public was incorporated into the assessment and other valued components.

3.2.3. Indigenous Knowledge

Through engagement activities, the Project Team will also collect Indigenous Knowledge relevant to the WSR study area and specific valued components, where available, from the 16 Indigenous communities identified by Ontario and the 10 Indigenous communities identified by the Agency. Indigenous Knowledge will assist in describing existing conditions (e.g., characterizing the study area, natural environment conditions, cultural characteristics and context, past and current land and resources uses, traditional teaching areas, relationships to the land and water, and other values of importance). Indigenous Knowledge will be used to assist in developing mitigation measures, monitoring commitments and accommodation measures, where necessary. The Project Team will document efforts to obtain

Indigenous Knowledge. It is recognized that each community may have its own protocols and procedures to be followed in transferring Indigenous Knowledge to outside parties such as WFN and the Project Team. The Project Team will ensure that related protocols are respected and will work with each community to understand how the information will be transferred, securely stored, and applied. Additionally, the Project Team will ensure that the Indigenous Knowledge provided will be protected and kept confidential. The Project Team will seek guidance from the community as to how the information will be used and published.

As Indigenous Knowledge is holistic, it can provide insights related to interrelationships between the natural, social, cultural, and economic environments, community health and well-being, Indigenous governance and resource use. Therefore, Indigenous Knowledge, where provided, will be included in all of aspects of the technical assessments of potential impacts of the Project on Indigenous peoples, or, given its holistic nature, may be presented in one section of the EAR/IS. It will also be considered in technical sections or chapters of the documents (e.g., baseline data on Species at Risk will include baseline information gathered through collection of Indigenous Knowledge). It is recognized that it is important to capture the context in which Indigenous groups provide their Indigenous Knowledge and to convey it in a culturally appropriate manner. Indigenous Knowledge will only be incorporated in the EAR/IS by the Project Team where written consent has been granted by the group(s) providing it.

3.2.4. Aboriginal and Treaty Rights

The Webequie Project Team will be engaging with Indigenous communities regarding potential impacts of the Project, including cumulative effects, on the exercise of rights, and where possible, the project's interference with the exercise of rights. Potential effects to be considered will include both adverse and positive effects on the current use of land and resources for traditional purposes, physical and cultural heritage, and environmental, health, social and economic conditions of Indigenous peoples impacted by the Project. For example, this will include such effects as reductions in the quantity and quality of resources available for harvesting (e.g., species of cultural importance, including traditional and medicinal plants; or interference with the current and future availability and quality of country foods (traditional foods). Webequie First Nation and the Project Team will discuss with Indigenous communities their views on how best to reflect and capture impacts on the exercise of rights in the EAR/IS. Should impacts on the exercise of Aboriginal and Treaty rights be identified, Webequie First Nation and the Project Team will work with Indigenous communities to determine appropriate mitigation measures to reduce or eliminate such impacts. Where no mitigation measures are proposed or mitigation is not possible, the Project Team will identify the adverse impacts or interference to the exercise of Aboriginal and Treaty rights and this will be described (e.g., level of severity) and documented in the EAR/IS. Webequie First Nation and the Project Team will advise Ontario and the Government of Canada on concerns Indigenous communities may have in relation to their exercise of Aboriginal and Treaty rights and whether their concerns cannot be addressed or mitigated by the Project Team.

4. Schedule

The scoping for the cumulative effects assessment described in **Section 2.1** (Scoping for the cumulative effects assessment) is expected to start in Summer 2021.

The outcome from the work described in **Section 2.1** to **Section 2.5** will be presented in the Environmental Assessment Report/Impact Statement.

5. Closure

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APPENDIX A

PRELIMINARY IDENTIFICATION OF VALUED COMPONENTS, EVALUATION CRITERIA AND INDICATORS

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Natural (Physical and Biological) Environment				
Atmospheric Environment	Air Quality	Qualitative and quantitative assessment of changes in ambient air quality for the following parameters: ○ NOx ○ CO ○ SO_x ○ TSP ○ PM_{10} ○ $PM_{2.5}$ ○ Diesel particulate matter ○ Ground level ozone ○ Selected VOCs: benzene, formaldehyde, 1-3 butadiene, acetaldehyde and acrolein ○ PAHs and any other contaminants of importance	Sensitivity of human health to air quality Sensitivity of the environment (soils, plants, animals) to air quality	• Indigenous consultation and Indigenous Knowledge • Ontario Ambient Air Quality Criteria published online by MECP • Data from Ontario's Ring of Fire station • Air Quality Pollutant Concentrations (MECP) • 2019 National Inventory Report (1990-2017): – Greenhouse Sources and Sinks in Canada • National Air Pollution Surveillance Network database (NAPS) • Project engineering team (construction phase): equipment list with details on nature, duration and frequency of work; description of related construction activities (workers' camps, aggregate processing plants, etc.); changes to landscape (number of hectares of removal of peatland and forested areas) • Project engineering team (operations phase): number of vehicles that will travel along the road; maintenance vehicles on

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
				the new roadway and construction of new buildings that shelter maintenance vehicles
	Greenhouse Gas Emissions	○ CO_2, CH_4, N_2O		
Acoustic Environment	Noise	Absolute sound level and changes to sound levels (quantitative) for Noise Sensitive Areas (NSA) ○ Overall sound levels during the daytime (L_d) (7 a.m. to 11 p.m.) and night-time (L_n) (11 p.m. to 7 a.m.) 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 p.m. to 7 a.m.) (dBA) ○ Change from existing "no-build" background sound levels, and the "future build" sound levels with the Project in place (background sound levels + Project) - number of NSA with 0-5 dBA increase	Sensitivity of wildlife to changes above existing noise levels - sensory disturbance can impact habitat availability, use and connectivity (movement and behaviour), leading to changes in abundance and distribution of terrestrial animals Sensitivity of humans to changes above existing noise and vibration levels - annoyance to individuals/households/communal uses in community based on noise and vibration proximity effects	• Field investigations • Indigenous consultation and Indigenous Knowledge • MNRF – Land Information Ontario (LOI) database sets • Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning, Publication NPC-300 (MOECC, 2013) • Model Municipal Noise Control By-Law Noise Pollution Control Guideline Construction Equipment, Publication NPC-115 • Equipment list provided by Project engineering team • Guidance for Evaluating Health Impacts in Environmental Assessment • Noise (Health Canada, 2017)

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
		- number of NSA with >5 dBA increase ○ Percent highly annoyed (%HA) at each NSA		
	Vibration	Potential construction vibration levels (peak particle vibration velocity (PPV)) from blasting or pile driving at waterbody crossing locations that would exceed federal and provincial limits/criteria		
Geology, Terrain and Soils	Geology, Terrain and Soils	Terrain and Soil quality - Changes or degradation to physical, chemical and biological characteristics of permafrost, terrain or topography and soils Terrain and Soil Distribution - Changes or degradation to the amount and continuity of terrain units (e.g., eskers, etc.) in the landscape	Influence local and regional biodiversity and contribute to the abundance and distribution of vegetation and wildlife on the landscape Support the quantity and quality of resources and land available for use by Indigenous peoples	• Field investigations • Indigenous consultation and Indigenous Knowledge • Data from previous assessment and government data sources
Surface Water	Surface Water	Number of waterbodies (i.e., lakes, ponds, rivers) crossed Changes to physical surface water level (e.g. potential for upstream flood) Changes chemical characteristics of surface water quality Changes to surface water quantity (velocity – metre/sec, flow pattern, volume – cubic	Potential for short- and long-term effects on surface water Surface water is the freshwater habitat for fish and aquatic organisms Importance to supporting fish, recreational use, navigation of watercraft and aesthetics Importance to human use (drinking water or other consumption)	• Field investigations • Indigenous consultation and Indigenous Knowledge • Ontario Flow Assessment Tool (MNRF) • Provincial (Stream) Water Quality Monitoring Network Data Catalogue (MECP)

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
		metres/sec) Changes to physical and chemical characteristics of sediment		
Groundwater	Groundwater	Changes to groundwater natural flow patterns or seasonal fluctuations or levels Changes to groundwater quality (i.e., physical and chemical and biological characteristics) Changes to groundwater quantity ○ Number or area (ha) of groundwater recharge or discharge areas crossed ○ Groundwater infiltration and recharge rates ○ Number of drinking water supply wells or springs displaced or potentially affected	Potential for short- and long-term effects on groundwater regime (natural flow/recharge interference, quantity and quality) Importance in the hydrologic cycle and ecological functions. Importance to human use (potable drinking water supply quantity and quality, or other consumptive uses)	• Field investigation • Indigenous consultation and Indigenous Knowledge • MNRF • MECP – Well Water Record Database, Permit to Take Water database • MECP – Data Catalogue • Provincial Groundwater Monitoring Network database • Climate Data from Canada Weather Stations • Ontario Geological Survey Bedrock and Quaternary Geology maps • Desktop studies.
Vegetation	Upland Ecosystems	Change, removal or degradation (ha) to the quantity, availability or quality of upland, riparian and wetland ecosystems Changes to occurrence of invasive/non-native species	Potential for short-term and long-term effects on upland ecosystems, riparian ecosystems and wetlands Social and cultural importance to Indigenous communities	• Field investigations • Indigenous Knowledge • Indigenous engagement and consultation • Ecological Land Classification of vegetation communities

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Vegetation Cont'd		Changes to fire potential on vegetation classes Changes to wetland function Changes to vegetation class, plant species biodiversity Changes to connectivity	Habitat for wildlife Ecosystem and landscape level biodiversity and function Provincial designation of natural features of value or significance	• Natural Heritage Information Centre (NHIC) • Crown Land Use Policy Atlas • Land Information Ontario • Ontario Land Cover Compilation V 2.0 (MNRF 2020a) • Ontario's provincial Satellite Derived Disturbance Mapping digital resource (Government of Ontario 2020) • Ramsar Canada Sites (Ramsar Canada 2020) • Ontario's Far North Land Cover Layer (MNRF 2014) • Natural Heritage Information Centre (NHIC)
	Riparian Ecosystems			
	Wetland Ecosystems			
	Plants of significance or importance; and designated Species at Risk plant populations (Including species with special conservation status or rarity in the province)	Changes or removal of species or assemblages present (ha)		

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
	Designated Areas (Areas of Natural and Scientific Interest, Environmentally Significant Areas, Significant Woodlands, Critical Landforms/ Vegetation Associations)	Changes to availability and abundance spatially (ha) Changes to distribution Changes to function and composition		
Fish and Fish Habitat	Fish and fish habitat • Brook Trout (*Salvelinus fontinalis*) • Northern Pike (*Esox lucius*) • Walleye (*Sander vitreus*) • Lake Sturgeon (*Acipenser fulvescens*) • White Sucker (*Catostomus commersonii*) • Longnose Sucker (*Catostomus catostomus*) • Lake Whitefish (*Coregonus clupeaformis*) • Chain Pickerel (*Esox niger*) • Yellow Perch (*Perca*	Changes to habitat available to fish (quantity and quality) Number or area (ha) of waterbodies crossed Number/area of waterbodies crossed that include known or assumed critical habitat such as spawning or nursery areas. Changes to abundance and distribution (population, survival, reproduction movement)	Potential for short-term and long-term effects on aquatic habitats Representative recreational species Important harvested species (country food) Social and cultural importance to Indigenous communities	• Field investigations; • Aerial photography; • Natural Heritage Reference Manual, (2010); • Ontario Species at Risk, May 2000, Committee on the Status of Species at Risk in Ontario (COSSARO); • Department of Fisheries and Oceans Aquatic Species at Risk Mapping (2019); • Royal Ontario Museum ichthyology collection mapping (Royal Ontario Museum 2019); • ROM Field Guide to Freshwater Fishes of Ontario (2010); • MNRF's Fish ON-line (MNRF 2019) database; • Natural Heritage Information Center (NHIC) Biodiversity

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
	flavescens) • Cisco (*Coregonus artedii*) • Burbot (*Lota lota*) • Forage / prey species such as Lake Chub (*Couesius plumbeus*) • Lower Trophic Organisms (e.g., Benthic Invertebrates)			Explorer database; • Committee on the Status of Endangered Wildlife in Canada (COSEWIC) reports; • Species at Risk in Ontario (SARO) List; • Ontario Freshwater Fishes Life History Database. • The Ecosystems of Ontario, Part 1, Ecozones and Ecoregions, William J. Crins et al. Ministry of Natural Resources, 2009; • Indigenous consultation and Indigenous Knowledge • LIO Database
Wildlife	Forest Birds (including Species at Risk (SAR) birds), such as: Canada Warbler (*Cardellina canadensis*), Common Nighthawk (*Chordeiles minor*), Evening Grosbeak (*Coccothraustes Vespertinus*) and Olivesided Flycatcher (*Contopus cooperi*)	Changes to habitat availability (quantity – hectare and quality) Changes to abundance (i.e., population) and distribution (i.e., configuration and connectivity) of species and habitat (number/ha) Changes to species richness (diversity) Changes to survival and reproduction Changes to predator access, habitat use and population Change in wildlife mortality	Potential for short-term and long-term effects on wildlife and wildlife habitat Social and cultural importance to Indigenous communities Important for continued ecological function and diversity of boreal ecosystems Federally (*Species At Risk Act*) or provincially (*Endangered Species Act, 2007*) listed species	• Field investigations • Indigenous Knowledge • Data from previous environmental assessments, scientific papers or grey literature • Crown Land Use Policy Atlas • Land Information Ontario • Natural resource management plans • Species recovery and restoration plans • Natural Heritage Information Centre • Bird Conservation Region plans (Government of Canada 2017) • Ontario Breeding Bird

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Wildlife (cont'd)		(due to increase anthropogenic stressors; hunting, trapping, vehicle travel)		• Atlas (Bird Studies Canada et al. 2006) • Ontario Reptile and Amphibian Atlas (Ontario Nature 2020) • Committee on the Status of Endangered Wildlife in Canada (COSEWIC) • Species at Risk in Ontario (SARO) list Committee on the Status of Species at Risk in Ontario (COSSARO)
	Raptors (including SAR birds), such as: Bald Eagle (*Haliaeetus Leucocephalus*)			
	Shorebirds, such as: Killdeer (*Charadrius vociferus*), Spotted Sandpiper (*Actitis macularius*), Greater Yellowlegs, Lesser Yellowlegs (*Tringa flavipes*), Solitary Sandpiper (*Tringa solitaria*), Wilson's Snipe (*Gallinago delicata*)			
	Waterfowl, such as: Common Goldeneye (*Bucephala clangula*), Ring-necked Ducks			

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Wildlife (cont'd)	(*Aythya collaris*), Mallards (*Anas platyrhynchos*) and Common Loon (*Gavia immer*)			
	Bog/Fen Birds and Other Wetland Birds (including SAR-birds), such as: Black Tern (*Childonias niger)*, Rusty Blackbird (*Euphagus carolinus)* and Yellow Rail (*Coturnicops noveboracensis*)			
	Bats (including SAR-bats), such as: Little Brown Myotis (*Myotis lucifugus*) and Northern Myotis (*Myotis Septentrionalis*)			
	Fur Bearers, such as: American Marten (*Martes Americana*), Beaver (*Castor canadensis*), River Otter (*Lontra canadensis*) (including SAR – Wolverine (*Gulo*			

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Wildlife (cont'd)	*gulo*))			
	Ungulates (e.g., moose), excluding SAR			
	Amphibians and Reptiles, such as: American Toad (*Anaxyrus americanus*), Boreal Chorus Frog (*Pseudacris*) and Common Gartersnake (*Thamnophis sirtalis*)			
	Pollinating Insects			
	Caribou (Boreal population)	Species: Changes to Population Size and Trend Estimates at the Range Level Changes to indirect mortality due to increases in prey sources (moose) leading to increase predation (wolves, bears, etc.) and spread of disease (e.g., brainworm) Changes to Indirect impacts due to sensory disturbances (e.g. light, sound, vibration) Changes to incidental mortality due to anthropogenic impacts (e.g. vehicular collisions, increased hunting pressure)		

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Wildlife (cont'd)		Caribou Habitat: Changes to habitat availability (abundance spatially and temporally) Changes to disturbances at Range Level ○ Additional disturbance (ha) to the range ○ Length of route adjacent to existing disturbance ○ Length of new linear disturbance from route Changes to habitat amount and arrangement/distribution at the Sub-range Level ○ Category 1: High Use Area – *Nursery Area* Habitat (number or ha) ○ Category 1: High Use Area – *Winter Use Areas* (number or ha) ○ Category 1: High Use Area – *Travel* (number or ha) ○ Category 2: Seasonal Ranges (ha) ○ Category 3: Remaining Areas in the Range (ha)		
	Designated Significant Wildlife Habitat	Area (ha) of significant wildlife habitat crossed or fragmented	Potential for short-term and long-term effects on significant wildlife habitat	• Indigenous consultation and Indigenous Knowledge • MNRF • NHIC • Desktop studies • Field studies

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
				• Significant Wildlife Habitat Criteria Schedules for Ecoregion 3E
Indigenous Peoples Land Use and Interests				
Indigenous Peoples' Land Use and Interests	Indigenous Current and Historical Use of Lands and Resources for Traditional Purposes	Changes to availability of lands and resources for traditional purposes Loss of or change to sites and areas (ha) used for traditional activities (hunting, trapping, fishing, gathering) ○ Location/number/area of fish harvesting areas affected ○ Location/number/area (ha) of seasonal hunting areas affected ○ Location/number/area (ha) of wildlife (e.g. moose) mating, breeding or nursery areas affected ○ Location/number/area (ha) of plants harvested for human consumption and /or medicinal purposes affected ○ Location and number of traplines affected Changes in preferred harvested species Changes to, or restrictions on, preferred harvesting methods	Aboriginal and Treaty rights, which are the collective rights of Indigenous communities, are recognized and affirmed by Section 35 of the Constitution Act Social/cultural/economic importance to Indigenous peoples	• Indigenous Knowledge and land use (IKLU) data where shared • Community Based Land Use Planning initiatives (if available) • Other studies undertaken in support of the EA such as the surface water, wildlife, ungulate, fish and fish habitat, vegetation and wildlife studies • Secondary documented sources including previous environmental assessments • Previous land claims (historic and outstanding) • Social Survey • Key Informant Interviews

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Indigenous Peoples' Land Use and Interests (cont'd)		Changes to access/routes to harvested species, including use of navigable waterways Changes to distance for harvesting preferred species Changes to timing/seasonality for harvesting preferred species		
	Indigenous Relationships to Traditional Lands and Resources	Location/number/Type of cultural keystone species affected Changes to experience of place and being on the land (sensory, aesthetics, connections)	Social/cultural importance to Indigenous peoples	• IKLU studies • Consultation and engagement activities • Key informant interviews • Oral histories • Historical documentation
	Cultural Continuity (ability to practice and transmit cultural traditions including historical disruptions where Indigenous peoples have a desire to reinvigorate a cultural tradition)	Loss of or change to quantity (number or ha) or quality of culturally and spiritually important sites and areas (e.g., ceremonial sites, sacred areas, teaching sites) Sufficiency of lands and resources for cultural practices Changes to cultural traditions or practices	Social/cultural importance to Indigenous peoples	• IKLU studies • Consultation and engagement activities • Key informant interviews • Oral histories • Historical documentation
Socio-Economic Environment				
Social	Population	Changes to population numbers Change in sub-group population number (Gender	The Project has the potential to result in net migration to Webequie First Nation and perhaps other communities	• Statistics Canada - Aboriginal Population Profile, 2006, 2011, 2016 Census Results

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Social (cont'd)		Based Analysis Plus (GBA+))		• Municipal, provincial and Indigenous government websites; • Municipal plans and reports; and • Provincial plans and reports
	Income	Changes to income levels	Community standards of living could increase leading to increased well-being and quality of life or poor spending habits and need for finance and household budget training	• Statistics Canada Census Community Profiles and National Household Survey • Social surveys
	Education	Changes to education opportunities	Potential for increased education opportunities due to enhanced access to larger centres	• Social surveys • Key informant interviews • Community documents (e.g., land use plans, comprehensive community plans)
	Housing and Temporary Accommodation	Changes to housing demand and supply Changes to housing costs and affordability Changes to number of people living in a home	Project requirements for worker accommodation during construction may result in temporary in-migration and increased demand for housing Housing costs could increase due to increased demand Increased demand for housing could result in more overcrowded housing conditions	• Indigenous consultation and Indigenous Knowledge • Statistics Canada Census Community Profiles and National Household Survey • Municipal and provincial government websites • Stakeholder engagement • Local Business operators and service providers • Academic literature
	Social Services	Changes to social service demand and supply		• Key informant interviews • Social surveys • Consultation and engagement activities • Municipal, provincial and Indigenous government

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
				websites (e.g., Ministry of Transportation Ontario traffic counts), plans and reports Local service providers (e.g., airports) • Industry reports • Academic literature
	Transportation and Related Infrastructure and Services	Change in traffic volume Change in demand for air and shipping services Change in opportunities for travel and road use	Resources may not be available to respond to potential changes in demand for services Resources may be needed to improve ownership and access to vehicles as well as the attainment of driver's licenses and insurance	• Transportation Ontario traffic counts), plans and reports • Local service providers (e.g., airports) • Industry reports • Academic literature • Social surveys
	Other Infrastructure and Services	Change in demand for water, waste and energy infrastructure and services	Potential for reduced potential to deliver services due to increased demand	• Base on population change indicator
	Social Cohesion and Culture	Changes to year-round population Changes to quantity of social connections Changes to quality of social connections Changes to participation in social and/or cultural events	Potential for social disruption or unity due to major infrastructure development project	• Social surveys • Focus groups

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
	Safety	Changes to perceptions of safety Changes to traffic safety Changes to crime rates Changes to rates of domestic violence Changes to rates of sexual and physical assault Changes to supply and demand of emergency services	Potential for increase in crime, domestic violence, and sexual and physical assault due to presence of non-member construction workers in proximity to the community Potential for decreased capacity of emergency services due to the above	• Social surveys • Focus groups • Key informant interviews • Police reports • Social service reports • Non-Government Organization and Interest group reports • Municipal, provincial and Indigenous government websites, plans and reports
	Other	Nuisance effects	Potential for nuisance effects such as noise and degraded air quality to affect community well-being and quality of life	• EA air and noise studies
Economic	Regional and Local Economy (Commercial Activities)	Change to economic opportunities Procurement opportunities Changes to price of goods and/or services	Project workforce hiring and procurement could increase employment, income, and training Potential for reduction in price to goods and services due to future road network (e.g. food)	• Statistics Canada information on economic sectors • Provincial and regional economic development reports • Business Operators • First Nations employment skills inventory • First Nations business inventory • Municipal, provincial and Indigenous government websites • Municipal plans and reports on economic development

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
				• Provincial plans and reports on regional sector development • Local service providers such as infrastructure and utility providers • Regional tourism reports • Industry report (e.g., mining and forestry)
	Labour Force and Employment	Changes to employment Training opportunities and barriers	Potential increase in employment and training opportunities Potential for limited employment and training opportunities for women due to childcare and other domestic responsibilities	• Statistics Canada labour force and employment data • Municipal, provincial and Indigenous government websites • Municipal plans and reports on labour gaps and markets • Provincial plans and reports on labour gaps and markets • Industry reports • Social surveys • Focus groups
	Government Finances	Changes to expenditures Taxation and Revenue	Project may result in changes to government expenditures and provide revenue from taxation	• Municipal and Indigenous community financial statements • Provincial plans and reports
Land and Resource Use	Land Use Compatibility	Compatibility with existing and proposed land use	Potential for incompatibility or disruption to existing and planned land use Potential to support planned land uses	• Spatial data on existing planned land uses • Land use plans (municipal, provincial and federal) • Community-based land use planning

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
	Mineral and Aggregate Resources	Area (ha) of significant aggregate deposits affected Area (ha) or number of active mines Area (ha) or number of mining claims	Potential effects on existing aggregate deposits (depletion of, access to) Potential effects on mining operations Potential effects on the mineral exploration industry Potential for uncontrolled access to areas of mineral exploration	• Spatial Data on existing mining and aggregate areas • Provincial and federal reports • Industry and regional reports • Stakeholder group information • Academic and Web-based Research • Ontario's Land Information (OLI) database
	Forestry Industry or Local Timber Harvesting	Change or disruption to forest activities	Potential to directly or indirectly disrupt forestry activities	• Indigenous and municipal government plans, reports and web-based data • Spatial Data on forestry areas and facilities • Industry and regional reports and plans (e.g., Forest Management Plans)
	Recreation and Tourism Activities (camps, trails, outfitters)	Location/number/type of activities or users affected	Of importance to communities to identify, maintain and protect recreational features and pursuits Potential for increased access to traditional lands for non-Indigenous recreation and harvesting	• Indigenous Knowledge • IKLU studies • Indigenous engagement and consultation • Business Operators
	Provincial Parks, Areas of Natural and Scientific Interest (ANSIs) or Conservation Reserves	Number and area (ha) of Provincial Parks, Areas of Natural and Scientific Interest (ANSIs) or Conservation Reserves affected	Parks and protected areas have social, recreational, environmental and health/ well-being values to communities and users	• Indigenous consultation and Indigenous Knowledge • MNRF • Business Operators • Desktop studies

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Human Health	Physical Health	Changes to physical health conditions	Indigenous peoples suffer from disproportionately poorer health outcomes as compared to the Canadian and Ontario non-Indigenous population, making physical health an important criteria Project may have the potential to affect physical health conditions indirectly through changes to health behaviours and access to health care	• Key informant interviews • Health survey • Data from nursing stations and/or local health units Academic research
	Mental Health	Changes to mental health conditions	Mental health issues, especially amongst Indigenous youth, are of significant concern to Indigenous communities Project may have the potential to improve mental health through the provision of employment and training opportunities Project may have the potential to lead to a decline in mental health due to employment conditions (e.g., racism, lack of flexibility and control, poor management, etc.) as well as other impacts ,such as changing environmental conditions, aesthetic quality	• Key informant interviews • Health survey • Focus groups • Non-Government Organization and Interest group reports • Data from local social service providers and nursing stations • Academic research
	Health Behaviours: Substance Abuse	Changes to smoking and/or vaping rates Changes to abuse of alcohol Changes to abuse of drugs	Project may increase rates of substance abuse due to increase in incomes and increased exposure/opportunities to obtain substances through greater outsider access to communities Project may decrease rates of	• Key informant interviews • Health survey • Focus groups • Non-Government Organization and Interest group reports • Data from local social service providers and

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
			substance abuse due to increased employment opportunities	nursing stations • Academic research
	Health Behaviours: Exercise	Changes to level of physical activity	Project may change levels of physical activity through decreased access to some outdoor spaces and/or increased reliance on motor vehicles	• Health survey • Focus Groups
	Health Behaviours: Recreational Activity	Changes to outdoor recreational activities (includes walking, boating, harvesting, skating, swimming, fishing, snowshoeing, fishing) ○ Changes to outdoor spaces ○ Changes to amount of time spent on recreational activities ○ Changes to types of outdoor recreational activities	Project may change access to some outdoor spaces, reducing time spent on recreational activities and/or leading to changes in types of recreational activities pursued	• Health survey • Focus groups • IKLU interviews • Community documents (e.g., Comprehensive Community Plans)
	Health Care Access and Quality	Changes in access to health care ○ Access to health care practitioner /doctor ○ Access to social, mental health and family services ○ Access to emergency services Changes in quality of health care provided	Potential changes to access to and quality of health care and other services may affect health outcomes and well-being of communities	• Key informant interviews • Social and health surveys • Non-Government Organization and Interest group reports • Municipal, provincial and Indigenous government websites, plans and reports • Data from local nursing stations • Academic research
	Dental Care Access	Changes in access to dental care	Potential changes to access to dental care that may affect dental health and other health outcomes and well-being of communities	• Key informant interviews • Health surveys

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
	Diet & Country Foods	Changes in food security ○ Consumption ○ Availability ○ Access ○ Quality ○ Enabling factors (time, health, harvesting equipment, environmental conditions, preservation and storage equipment)	Potential for changes to consumption, availability, access, quality of country foods as well as enabling factors due to Project including: ○ Loss of traditional lands and access routes ○ Reduced availability of game due to traffic mortality, noise dust and odours, feeding grounds, breeding grounds, migratory routes ○ Limited time due to wage-based employment commitments ○ Poor health ○ Affordability of harvesting equipment (e.g. gun, snowmobile) due to higher incomes ○ Affordability of preservation and storage equipment (e.g. larger freezer) due to higher incomes	• Indigenous Knowledge • Key informant interviews • Non-Government Organization and Interest group reports • Municipal, provincial and Indigenous government websites, plans and reports • Country foods survey • Academic research
	Physical Environmental Factors Influencing Health	Changes to air quality Changes to noise levels Changes to surface water and ground quality, including drinking water Light pollution, including visual impact	Potential for physical environmental changes to affect health and well-being	• Other studies undertaken in support of the Project such as air quality, noise, soil, surface water, groundwater, health impact and risk assessment • Indigenous Knowledge

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Visual Aesthetics	Visual Character and Sensitivity	Changes to visual character of the area (scenic quality and views of the land) from physical alteration of landforms, terrain and vegetation cover Number of culturally important viewpoints within 1 km that have line of sight of toward the road corridor Area (ha) of visual aesthetics areas of concern crossed by the road	Potential to alter experience on the land and scenic views of value or importance	• Indigenous Knowledge • IKLU interviews • Consultation and engagement activities • Data/images from drone • High Resolution Orthophotos • Light Detection and Ranging Earth Digital Elevation Model • Community-based land use planning
Archaeology and Cultural Heritage				
Archaeology	Archaeological Sites and Resources	Number and/or area (ha) of archaeological potential affected Number and/or area (ha) of archaeological sites associated with Indigenous communities affected Number or area (ha) of Euro-Canadian archaeological sites affected Number/area(ha)/type of burial sites affected	Archaeological remains or artifacts are a non-renewable resource that could be affected by project activities Cultural and spiritual importance to Indigenous communities Archaeological sites are protected under the *Ontario Heritage Act* Burial sites are afforded protection under the Ontario *Funeral, Burial and Cremation Services Act*	• Indigenous Knowledge • Indigenous engagement and consultation • Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) - Ontario Archaeological Sites Database • Existing archaeological assessments/reports • Desktop studies

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
Cultural Heritage	Built Heritage Resources and Cultural Heritage Landscapes	Number and type of Indigenous or non-Indigenous built heritage features/sites affected (e.g., old trapping or hunting camps, etc.) and/or cultural heritage landscapes that may be affected (e.g., spiritual or symbolic sites of value or interest to Indigenous communities) Number of Provincial heritage properties affected Number of known (or previously recognized) built heritage resources affected and/or cultural heritage landscapes crossed Changes to sites or things of historical or cultural significance, oral histories, cultural values and experiences of being on the land	Built heritage and cultural heritage landscapes are a non-renewable resource that could be affected by project activities Built heritage resources and cultural landscapes, including those that may have spiritual and symbolic meaning for Canadians and Indigenous communities Built heritage resources and landscapes are protected under the *Ontario Heritage Act*	• Indigenous consultation and Indigenous Knowledge • Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) database • Existing built heritage and cultural landscape assessments/reports • Desktop studies
Technical Considerations				
Technical Considerations	Safety and Reliability	Conformance of road to provincial road safety standards and ability to provide reliability for users	Safety and reliability are primary technical and socio-economic concerns for Webequie community and mineral exploration/development sector users	• Indigenous consultation and Indigenous Knowledge • Ministry of Transportation (MTO) • Canadian Highway Bridge Design Code • Transportation Association of Canada (TAC) - Geometric Design Standards

Preliminary Criteria and Indicators

Factor	Criteria	Indicators	Rationale for Selection of Indicators	Potential Data Source
				• Desktop and engineering studies
	Constructability	Terrain and soil stability – Area (ha) of hazard/unstable land crossed Localized considerations – number/type of extraordinary site-specific construction challenges	Constructability is a key technical consideration for the Project due to the remote nature of study area	• Engineering and design standards for roads • Environmental agencies' guidelines and regulations
	Cost	Estimated construction capital cost ($) Estimated annual operations and maintenance cost ($) Length (km) of all-season road	Providing value and cost-effective road to WFN and Province is deemed to be a significant technical consideration Length is typically a reliable indicator of cost implications	• Industry engineering design, construction and operation/maintenance standards and guidelines • MTO • TAC
	Location of Supportive Infrastructure (aggregate supply areas, camps, laydown/storage yards, access roads)	Proximity/distance (km) to corridor of aggregate source sites, including quality of aggregate deposits Capability to support viable temporary construction camps Constraints to haulage/movement of materials and equipment Length (km) of temporary and permanent access roads required to construct and maintain the road	Location of supportive infrastructure informs constructability, construction budget, and operations and maintenance costs	• Indigenous consultation and Indigenous Knowledge • Industry engineering design, construction and operation/maintenance standards and guidelines • MTO • TAC